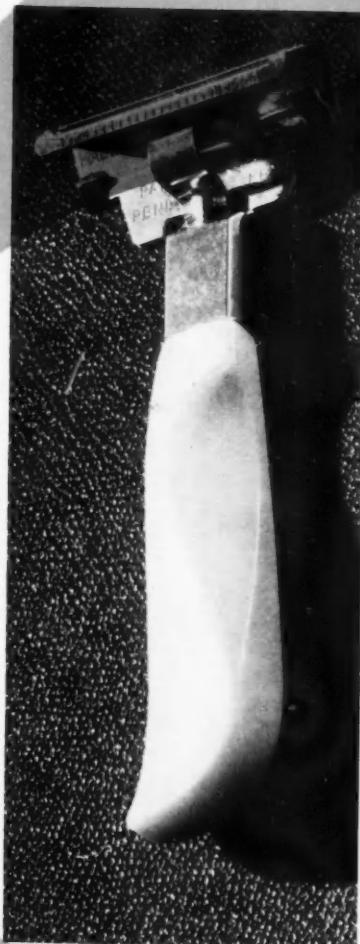


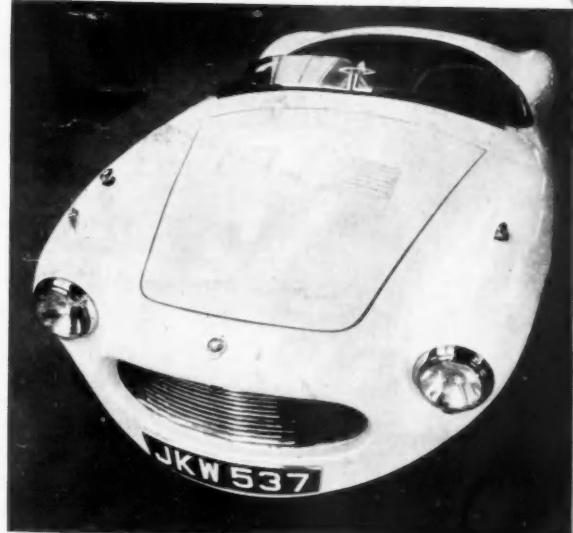
Design



Thonet chairs p.7

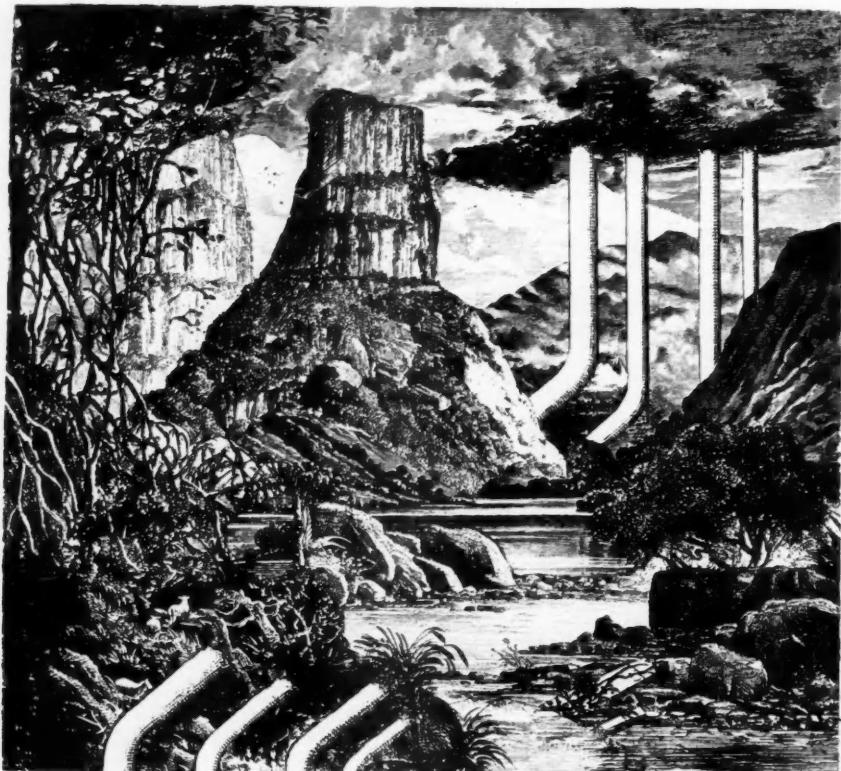


Plastic design policy p.11 *Globe 8000 Luminaires p.28*

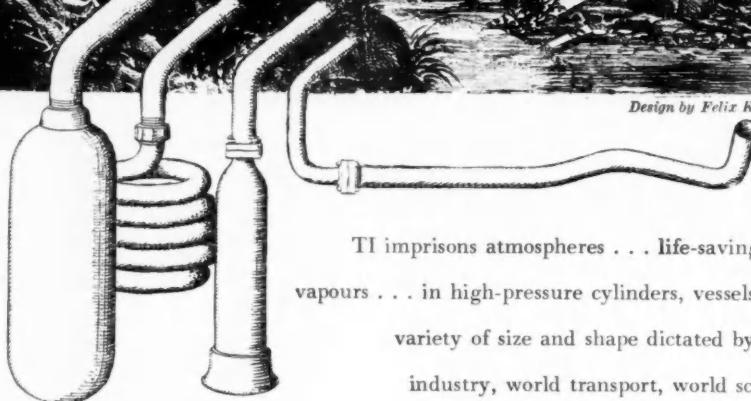




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Design by Felix Kelly



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EDITOR: Michael Farr

EDITORIAL ADVISERS: Gordon Russell,
Alister Maynard, Paul Reilly,
J. M. Benoy

ART EDITOR: Peter Hatch

ASSISTANT EDITOR: John E. Blake

STAFF PHOTOGRAPHER: Dennis Hooker

EDITORIAL OFFICES: Tilbury House,
Petty France, London SW1
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DESIGN for January

- Exhibition for wallpapers and fabrics
- London showroom design
- DESIGN POLICY
for sports cars
- Review of Current Design

Design

More credits please

MEMBERS OF THE SOCIETY OF INDUSTRIAL ARTISTS recently held a private 'brains trust' to discuss the problem: how to be your own public relations officer. This discussion seemed to us timely, if not indeed overdue.

In a country like the United States where even a railroad booking clerk may sport his name on a card for all to read, it is not surprising that designers also get their credits and have their names prominently associated with the products for which they are responsible. American designers are admittedly more alert to publicity than are many of their British colleagues; many American designers conduct or hire their own personal publicity services; some even issue broadsheets recounting their activities and successes; all are aware of the power of the Press and of the promotional value of good photography.

But it is not only the American designer who scents good business in good public relations. His client, too, is seldom shy about telling the world that he has got a good man working for him; in his press advertising and his printed publicity he will often proudly boast that his company has retained the services of an industrial design organisation or that such and such a product is Al Soandso's exclusive design. The result is, of course, that the top-flight American designers, and others not so top-flight, have become household names – and names that make news. Their influence moreover is not confined to their own home market. American styling could not have been so widely exported had American stylists remained anonymous back-room plodders.

We hold no particular brief for the tricks of their trade; in many cases they have so overplayed their hands that editors now print 'styling' and 'stylist' in inverted commas. But, in spite of pennywise anxieties lest once a designer makes his name (or has it made for him) he will ask for more money or go elsewhere to get it, we believe it to be sound commonsense for a manufacturer, who has a first-class designer working for him, to say so boldly and publicly. Equally a designer with a success story to publicise should always give full credit to his client and to all those other members of the production team who have had a hand in developing the product. With more credits all round the day will sooner come when good design and good designers are accepted as essential business assets.

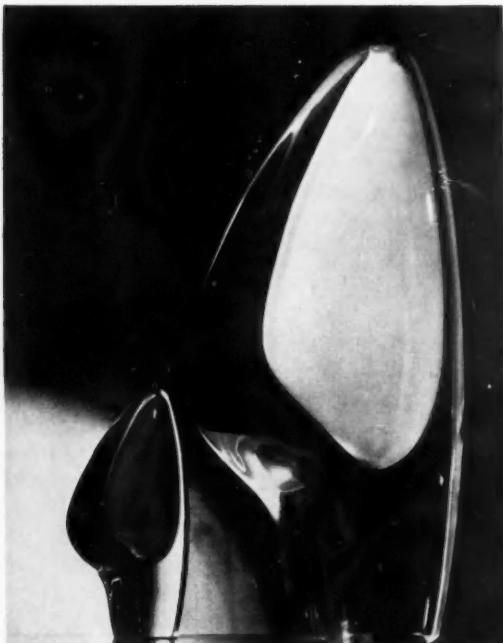
POINTS and POINTERS

THE CONSULTANT DEFINED Consultant designer is a vague term which in many minds conjures up visions of high-powered American executives and streamlined locomotives. Coming nearer home we might ask when is a consultant not a free-lance? The question could be debated at length and not very profitably. Perhaps it is better to leave out the term 'free-lance' altogether and concentrate, as one branch of the SIA is now doing, on individuals who have had "specialised experience in at least one branch of design (and) are in practice as both general and consultant designers". In the October issue of the SIA JOURNAL we have for the first time in this country an authoritative definition of the consultant designer.

After two years' deliberation the Society of Industrial Artists has announced the formation of the Consultant Designers' Group. To start things going a committee has been set up to select the first six permanent members. The committee will then resign and its members may, with other interested colleagues in the SIA, offer themselves individually for membership.

The group has set itself a high standard. Candidates

'Modern Art in Finland' exhibition organised by the Arts Council of Great Britain: Glass designed by Timo Sarpanera and made by Karhula-Littala.



for election must be in private practice and provide 20 designs, only 12 of which can belong to any one of the following design sections: graphic, constructional, product, product mechanical and miscellaneous. Each section has its own categories and not more than four designs can be drawn from one of them. In addition there are two important requirements to be met. The candidate must show that he has specialised experience in at least one branch of design and present details of three or more cases where he has acted as an outside adviser. We wish success to the new group and hope that it will do much to strengthen the consultant designer's position as a recognised professional.

VIEWS EXCHANGED "Contemporary furniture is a thing of the future", one speaker was heard to remark at the recent furniture conference for retailers and manufacturers held by the Coid. However, that remark did not set the tone of the conference which in fact did a new and valuable job. It brought together more than one hundred retailers, manufacturers, representatives from the relevant trade organisations, and designers, to discuss design together. After the free exchange of views it is hoped that more people concerned with making and selling will find new and better ways of increasing the public's appetite for furniture of good modern design.

On the lighter side, perhaps the plum remark came from a manufacturer who said that during lunch time every day he had to sit on Swedish design of world-wide acceptance. "If that is supposed to be the furniture of the age," he said, "it is quite apparent that I am anatomically out of date".

FROM FINLAND London is to see a small exhibition of work by Finnish artist-craftsmen, together with paintings and sculpture. The exhibition catalogue pays tribute to William Morris as the man who inspired the first of two recent developments in Finnish arts and crafts. Later, a new movement began and this, represented by the work of Dora Jung in textiles, Kaj Franck and Tapio Wirkkala (the designer of the exhibition) in glass, Alvar Aalto and Ilmari Tapiovaara in furniture, as well as more recent but less well known designers, provides the spirit of the exhibition. Apart from the furniture there will be little industrial design, although the exhibition is rich in designs which industry could take up for development.

'Modern Art in Finland' at the New Burlington Galleries: December 12 - January 23.

DESIGN POLICY FOR NEW TECHNIQUES



1. 1836: *The first bent veneer chair designed and made by Michael Thonet. Apart from the comparatively light structure, the veneers have been bent in a way that is decorative and functional at the same time.*

Four phases in the development of Thonet chairs were shown recently in a New York exhibition. Although Thonet has long been famous for bent wood chairs, it is more significant that the firm successively adopted new materials and techniques and supported designers with revolutionary ideas. The anonymous simple shapes that were created can now be judged as essential to the formation of the modern movement in industrial design.

IT IS QUITE POSSIBLE that the custom which is common in China and Japan of gradually training a tree into a pre-determined form by means of ropes and props may have originated through the necessity of obtaining curved shapes of timber for roofs, ribs of boats and perhaps even ploughs. For such purposes the cutting of a curved shape from a straight-grained plank would produce a serious weakness. Yet to grow shapes, to simulate the natural 'knees' which occur in English oak and other woods, is bound to be a very slow process, calling for constant and skilled attention. Experiments in bending small sections of timber 'cleft' – that is split by an axe to ensure its straightness of grain and then boiled or steamed – must go back a long way. The familiar Windsor or railback chair has existed in one form or another for at least 250 years. This type largely relies for its strength on the tough elm seat into which holes were bored on one side to take the back and the other to hold the legs. The back consisted of an inverted U-shaped bow, bent from one length of ash or yew. A similar U-shape often connected the front legs and was attached to the back legs by short turned spindles. It was not uncommon to use a like shape for the arms. In the ladderback chair, too, the back legs were turned and bent to give the necessary rake.

The small exhibition held recently in the Museum



2

2. 1850: Bent veneer chair. The design of the chair bears no relation to the old-fashioned needle-point seat. The shape of the structure has been dictated simply by the possibilities inherent in veneer bending.

3. 1860: Bent wood rocking chair which is one of the earliest examples of Thonet's work after he departed from bent veneers. Compare the tubular steel chair by Mies van der Rohe, 7.

4. 1870: Bent wood armchair showing a greater simplicity which comes nearer to the ubiquitous bent wood chair of six years later. Here plywood has been chosen to form the seat. The chair was often used by Le Corbusier; he chose it for his pavilion at the 1925 Paris Exhibition.



3



4

of Modern Art in New York showed fascinating developments of this bending technique begun in 1836 by Michael Thonet, founder of the famous chair-making firm. The exhibition was designed by Enrico Peressuti and arranged by Greta Daniel of the Museum's Department of Architecture and Design, to celebrate the one-hundredth anniversary of the formation of Thonet Brothers Inc, in the United States.

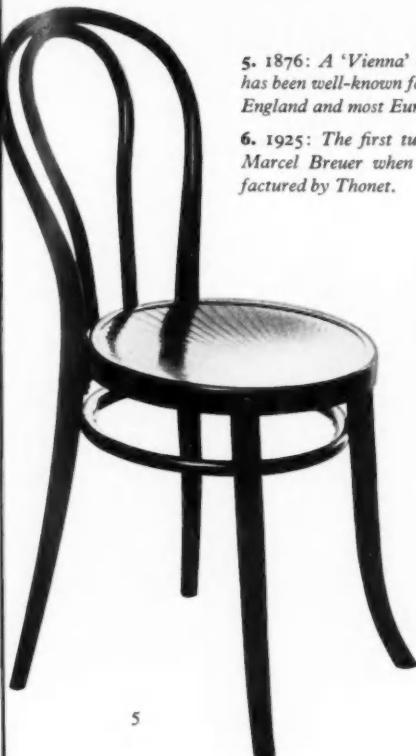
The thirteen chairs exhibited showed the development from the first veneered chairs through bent wood chairs, including the light inexpensive café chair which since 1876 has been known all over the world, to the tubular steel chairs designed in the nineteen-twenties at the Bauhaus by Marcel Breuer and Mies van der Rohe. The latest development was shown in the bent plywood chairs designed by Ilmari Tapiovaara and Joe Atkinson in the last few years. They were a further proof of the experimental attitude towards design which has always been characteristic of this firm.

The earliest chair in the exhibition was designed and made by Michael Thonet in 1836, in his cabinet-makers' shop in Germany. Unlike traditional chairs carved of solid wood, this model was formed from bent wood veneers which resulted in a much lighter

piece of furniture. Thick veneer strips were bundled together, saturated with glue and exposed to heat in a wooden frame. However, the use of veneers did not prove practicable and Thonet began experiments with bending solid wood. In 1842 he moved to Austria and formed a partnership with his five sons. Together they set out to produce a light and cheap chair which would stand up to very hard wear.

Bent and demountable chairs

In order to obtain the full advantage of being near the forest and, if possible, of floating his timber to the factory, Thonet had to discover a method of packing his chairs flat to reach their destination and then assembling them by unskilled labour, otherwise it would have been cheaper to take the logs to the town. The knock-down process was not practicable with the Windsor or ladderback chairs, with which Thonet must have been familiar. He solved the problem by sub-assembling to exact standard sizes such parts as seats, under-rails and sometimes centres or backs, and then bolting or screwing the whole chair together on arrival: surely the first example of mass-produced demountable furniture. By so doing he invented and perfected an entirely new kind of chair. The bending



5

5. 1876: A 'Vienna' bent wood chair with plywood seat that has been well-known for three generations in the United States, England and most European countries.

6. 1925: The first tubular steel chair. This was designed by Marcel Breuer when at the Bauhaus and was later manufactured by Thonet.



6

7. 1926: The first chair to make use of the resilience of steel by dispensing with back legs. Designed at the Bauhaus by Mies van der Rohe. It has a leather seat and back support.



7

of the wood by steaming meant that it was an advantage to receive it wet; the process drove out the sap and left the wood seasoned when it dried, which it quickly did in a heated room. The ease with which curves of widely varying radii could be formed made the process particularly suitable for rocking chairs, and these have always been popular in the United States. The thin and light plywood seat fixed on to a bent wood seat-frame, 4, must have been one of the very earliest uses of ply in furniture, and is still an excellent solution, especially where the seat is likely to be stood on. Cane, too, was much used and was even lighter. Indeed, Thonet's ideas on lightness for chairs were as far ahead of his time as were his methods of attaining it.

The astonishing cheapness of the Thonet chairs when they began to find their way into England from the middle of the nineteenth century onwards made them very popular. Perhaps for that reason there was a certain snobbish reaction to them, although many achieved that rare fitness of uninhibited design which can perhaps be described as organic. One of the bent wood chairs, 4, made by the firm as early as 1870, was used by Le Corbusier in his pavilion designed for the Paris Exhibition of 1925. When after the first World War several German architect-designers refined some

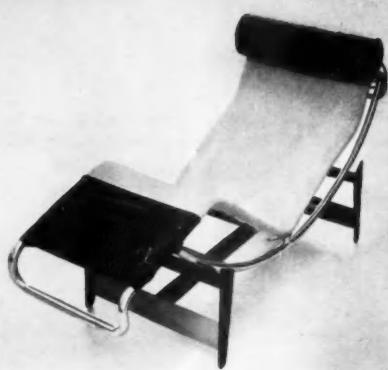
of the shapes and details, there could no longer be any doubt that here was an excellent solution to, at any rate part of, the seating problem in all sorts of small houses.

Bending tubular steel

The next development for Thonet was the introduction of tubular steel which in the nineteen-twenties was revolutionary in furniture design. The initiative for using steel was first taken by Marcel Breuer in 1925, when he was in charge of the cabinet-making class at the Bauhaus. He produced in a small workshop the first tubular steel chair, 6, and used it in the new Bauhaus at Dessau. The chairs were soon afterwards produced in quantity by A. Lorenz in Berlin, but in 1929 Thonet took over and started production on a larger scale. This tubular steel armchair produced by Marcel Breuer led Mies van der Rohe to make use of the resilience inherent in steel and design a chair without back legs. This cantilevered chair of 1927, further developed by Breuer in 1928, became the prototype for manufacturers in many countries, who made their own modifications. The chairs were used very widely in kitchens, restaurants and as outdoor furniture. Le Corbusier also interested himself in the



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8. 1927: Revolving leather chair designed by Le Corbusier, Pierre Jeanneret and Charlotte Perriand. This chair carried on the development in the use of tubular steel and incorporated a revolving mechanism.



12

technique and his chairs of 1927, one with a swivel and one with reclining positions, went even further by introducing the element of mobility.

That Thonet's should be one of the first firms to recognise the possibilities of developing steel tube furniture was natural. There are many similarities in the use and bending of wood and steel. The extra strength of the latter made it possible to dispense with the back legs, but weight and cost have frequently to be reduced before steel compares favourably with wood for this purpose. The unsympathetic feel of metal and the difficulty of finding a really satisfactory finish for it are also disadvantages, but for certain uses in public and semi-public buildings the steel chair has come to stay.

In the most recent developments carried out by Thonet Brothers in the United States, a return has been made to the use of wood, and particularly moulded plywood, in designs by Ilmari Tapiovaara and Joe Adkinson. Both examples by these designers, 11 and 12, also represent a return to the knock-down type of furniture, first exploited over one hundred years ago by Michael Thonet. Thus in some of the latest designs Thonet's has again used the services of distinguished designers, but in several instances with a departure from the solid bent wood technique which the firm has for so long used successfully. It is to be hoped that we shall see further developments in it.

9. 1927: Adjustable reclining steel chair designed by Le Corbusier, Pierre Jeanneret and Charlotte Perriand. The chair had some wooden members and could be tilted to various angles.

10. 1928: A further development by Breuer. This chair was also without back legs, but this time using a cane seat. It became very widely known and was imitated by other manufacturers.

11. 1949: Ilmari Tapiovaara designed this adjustable lounge chair for Thonet Brothers Inc. Leather was used as a covering for the adjustable plywood members which are demountable.

12. 1952: Bent plywood chair designed by Joe Adkinson which shows the use of another new technique by Thonet. The chair can be stacked and is also demountable for storage or transport.

British Industrial Plastics Limited

J. Beresford-Evans



Hand work in progress on a tool used in the moulding of a condiment set.

To introduce the following article Mr Charles H. Glassey, Managing Director of British Industrial Plastics Ltd, writes :

'My company is primarily concerned with the manufacture and sales of amino plastic products. It is, however, our belief that we can best serve not only our own interests but the interests of the plastics industry as a whole, which are complementary, by utilising our technical knowledge on product and mould design to ensure that potential customers get the best designed goods made from the most suitable plastics raw materials.

'If we succeed in this objective we are satisfied that the plastics industry must benefit and our own company take its share. The response to date encourages us to continue and enlarge this service.'

FROM THE EARLY DAYS, when plastics were often cheap and nasty substitutes for better things, British Industrial Plastics Ltd had the good sense to realise that the technical advantages of the newer plastic materials were not in themselves sufficient to prevent mouldings from having an even lower status than some of the earlier plastic products. Mouldings of all kinds were being hurled into cheap markets and the serious sections of the industry were labelled with the rest as purveyors of second rate goods.

British Industrial Plastics, a vertical group of associated companies concerned with a very wide range of techniques in the plastics industry, was one



*C. H. Glassey, Managing Director,
British Industrial Plastics Ltd.*

of the pioneer users of urea formaldehyde, known by the trade name of BEETLE. The group still specialises in the amino group of resins. These companies framed a sales policy, tentative at first, but with more confidence as its success emerged, of including good design among the things they had to offer. It is most significant that the value of good design to the group of companies outgrew its domestic phase, and today they are designing products and advising on design for goods which may be moulded by competitors using other plastic materials.

The group manufactures moulding powders, and resins used in paper making, foundry work, paints, coatings and adhesives. One branch, The Streetly

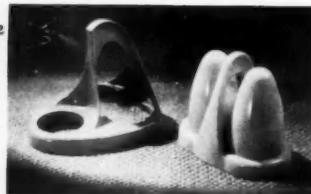
Manufacturing Co Ltd, is a trade moulder, fulfilling customers' orders rather than moulding products of its own for direct sale. Other branches of the group make moulding presses and tools. And so, within a single organisation, there are several of the facets which make up the whole plastics industry. BIP is a concern in a fortunate position with technical and design problems arising at different levels. Each of its products could be studied as a problem, whether of moulding powder, tool design or production, by internal collaboration with the group's industrial designer. Furthermore, being a trade moulder, there is always a diverse and healthy body of criticism coming from the users of its mouldings.



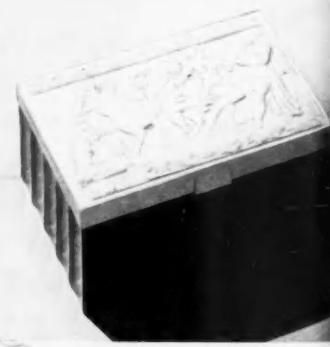
1: The hey-day of BEETLEWARE, 1932, when good quality urea mouldings in clean colours gave the picnic basket a fresh start. The cruets and egg cup, which are more domestic than picnic, are in the geometric idiom of modern thought at that date, and their forms were good enough to wear well.

2 and 3: Cruets and a stand that required ingenious tooling, 1942-6. The cruets owe as much to geometry as the earlier ones, although the forms are subtler; the stand is a pointer to the more plastic or less mechanistic forms that will follow.

4 and 5: Two early cigarette packs, 1935. These are in the fashionable idiom of their day, the 'Kitsch' reliefs being appropriate to the market. They should be compared with the pack for a similar purpose and market designed two years later, 6. This apparently shows the designer's more sensitive grasp of the medium, but in fact it is the market's taste which has changed. An educative process has led it away from imitation and towards sounder plastic concepts.



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A. H. Woodfull became staff designer at Streetly in 1931, at a time when most would-be designers went into advertising and staff designers were only heard of in the decorative art industries such as textiles and wallpaper. He trained at the Birmingham College of Art and Crafts and practised as a silversmith for several years before submerging himself at Streetly. The subsequent emergence of his influence as a designer together with his vocational attitude to the job is not a simple matter. Firstly, it required a management with the vision to support its designer consistently through the slow, beginning years. In addition it needed a person with the ability to design successfully for products ranging from the purely

utilitarian to the fashionable, coupled with considerable technical knowledge and the will to collaborate with specialists.

Up grading design standards

Because the company moulded for customers' needs it could often do no more than soften some of the less well designed features that were ordered. At the best it was not moulding products to agree with its own design policy, but with the different policy of an enlightened customer. The result might well have proved frustrating or unprofitable. Instead of that, by holding confidently to a policy of producing the best-



7: Black is an unexpected colour for a perfume pack, but 'Top Hat' was topical in 1936. Mischiefous in its association with both chorus and stage door, it was well suited to counter display. We can better realise why this was an outstanding pack of its day by comparing it with some more recent urns and fancy stoppers.

8: These lampshades with moulded galleries were designed in conjunction with Benjamin Electric Ltd. They pack well and they avoid the

disadvantages of a metal gallery used with a plastic shade. The gallery arms are sprung into position, where they give a firm and evenly dispersed grip on the shade.

9: Production model of a portable radio, 1949. The case was made from two mouldings that interlock. To form the handle and grille needed considerable technical ingenuity, and the gentle curvatures of the shape show the qualities of the moulding material to good advantage.



looking mouldings that the nature of its business would allow it to make, a large number of people has been educated over the years to think of moulding as a technique that justifies serious shaping and detailing. Much of this change of view has, of course, been due to wider trends, such as the interest aroused by the work of consultant designers, but much of it also results from the enormous quantity of general mouldings which have been groomed, redesigned and initiated by Woodfull at Streetly.

The mouldings that Streetly produces are not always the gracious, exciting or photogenic shapes that would be accepted without question for a glossy exhibition. They are more significant than that, for

they comprehend the things of everyday life—gas taps, accumulator plugs, canteen ware, butchers' trays, electrical components—with a variety and mass effect that has come into every home. They have made many moulders and users of plastics see greater value in careful design.

At first, somewhat naturally, the emphasis was mainly on caskets, display packs and such things, which the market expected to be obviously 'beautified'. Later Streetly was able to give more attention to kitchen and bathroom equipment, but the full effect of its approach to design was noticeable when a considerable part of its industrial mouldings came across Woodfull's drawing board.

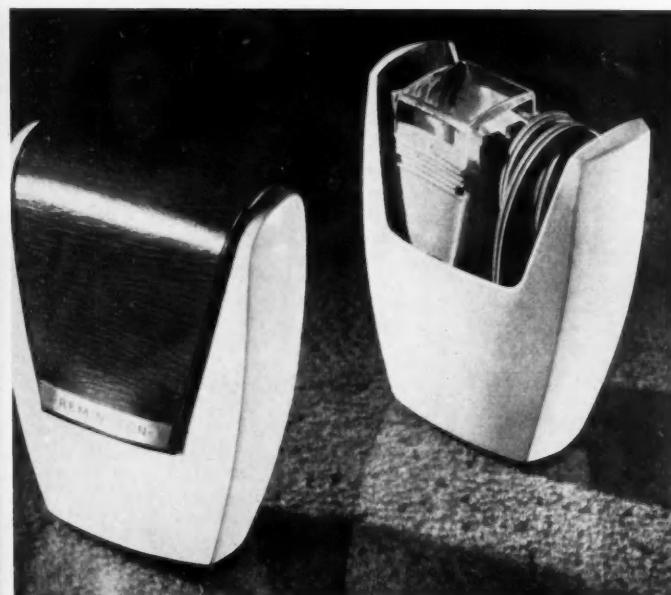


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10: Prototype model, prior to production, of a desk index pad, 1949. Moulded in black and coloured thermoplastic with a metal index strip and operating button.



11

11: Prototype models of a pack for an electric razor, 1949. The combination of leather with pale grey urea is an original conception, for it brings out the texture of both materials. At the same time it solves the hinge problem, which is always difficult in thermosetting mouldings.

12 and 13: The 'sleeping beaker' had been used widely in an advertising campaign. The problem was to capture the spirit of the illustration in a moulding that would need very little machining and could be given fast mechanical finishing. A very large run was required in a matter of weeks, which justified laying down five six-impression tools.

13



CADBURY'S
Bourn-vita

Design service for industry

This endeavour to bring 'art to an artless industry', an experiment spread over 20 years, has proved so successful to the industry and to the firm that the final, logical step was taken just over two years ago. The managing director, C. H. Glassey, set up a Product and Mould Design Service, with Woodfull, James Butler and four assistants. To deal with this they were moved from Streetly to undertake a service that aimed to embrace the whole industry. The purpose is to supply buyers and users of mouldings and moulding materials with designs and advice. Further, they initiate designs in advance of the market by

throwing out suggestions for classes of product which have not previously existed or have not been conceived as mouldings. The intention is to ensure that industry as a whole, as well as the plastics industry, is helped to make mouldings that are technically sound, economical and of good appearance. The service is now well established and enquiries are coming in from overseas.

A customer, whether a manufacturer ordering a component or a housewife out shopping, will usually ask for something already on the market, or for an item like it. The market, and therefore the industry, tries to satisfy these demands so that the development of new forms comes by slow and tentative stages, especially when tooling costs are high. Many branches

MOULDING DESIGN QUESTIONS

There is no reason why plastic mouldings, because they can be produced in enormous quantities, should look as if they came out of an automatic lathe. They are shaped from a material which under heat and pressure will flow into a mould. In general terms, an easy transience from one plane to another, a smooth and rounded mould, means fast moulding with little danger of rejects through specks of dirt (more important with a pale and clean coloured material like urea than with phenol). Most domestic mouldings are finished by tumbling, if small, or by buffing. Hard edges, sudden changes from flat and radius, and any features likely to interrupt the passage of the buff will slow down the finishing and are always likely to cause rejects through burning.

Designers are fenced in by the tools of their trade, compass and set square: toolmakers, the makers of the moulding tools, are similarly influenced by tools which produced the cube and cylinder. Such an analogy (although strictly in keeping with Platonic teaching) has been the cause of much rigid, mechanistic design, which is more appropriate to products shaped from metal than from a freely flowing material like a synthetic resin.

Mould making is a highly skilled craft and it is not inappropriate that moulded goods should have some of the gentle and subtle curves which have formerly been associated only with the skilled craftsman working in ivory, hardwood, stone, etc.

Indicative designs



14

14: Proposed design for a thermos flask stopper, which was seen and adopted by a Belgian manufacturer. This is an instance of an old mechanism, which has almost been forgotten in its original ceramic form, taking on a new appearance and a new lease of life in a material appropriate to the new application.

15: An 'indicative' design for a safety razor handle, which is quite different from the conventional handles yet within the razor tradition. It 'handles' well and it has a sculptural quality. Although strictly functional it has the form and finish which, until now, has been associated with fine craft work and not with plastic mouldings.

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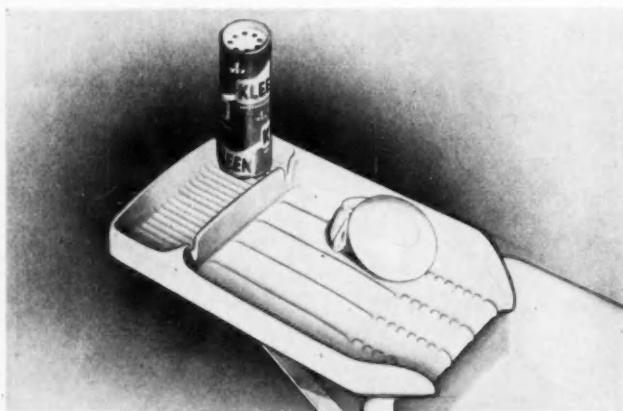
of industry are necessarily conservative and tend to work in familiar fields. Where they are weakest, therefore, and where the industrial designer has the greatest responsibility, is in anticipating public taste and in thinking of the possible requirements of the user. These needs may never be expressed through ordinary channels. Indeed, they may never be recognised as needs at all until a potentially new product is put before the buyer.

It is not expected that the 'indicative' designs produced by the BIP product and mould design service will be snapped up and moulded by enterprising manufacturers, although some of them have

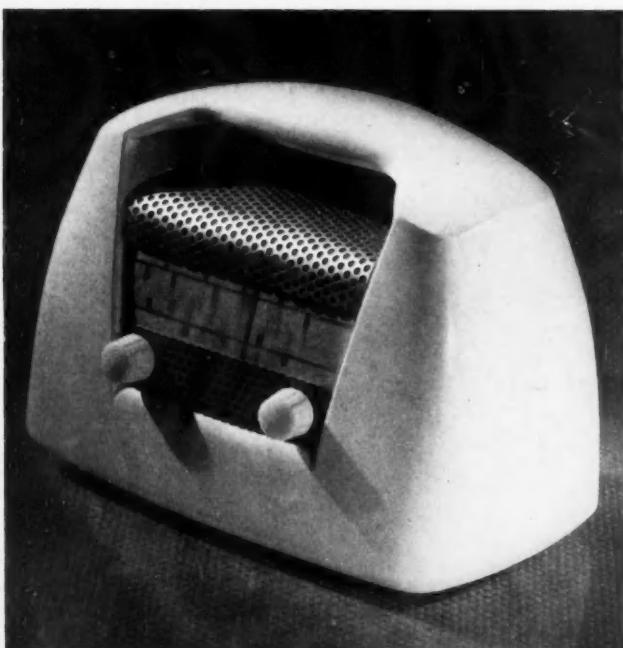
been. It is hoped rather that they will cause people to re-assess their own circumstances and be inclined to find fresh opportunities for moulded materials used in the right way. Indicative designs carry no obligation for they are meant to be copied, cribbed or merely looked at. They are the products of a design team with orders to go ahead and freedom to give its own ideas full expression.

Direct clients of the service - those who come to it for advice - are buyers of moulding powders, moulders' customers or potential new moulders. They are not necessarily users of BIP powders - design and advice is not limited to the amino resins - and the

Indicative designs *continued*



16



17



18

16: Suggested draining board, moulded with a very deep rim that gives strength and also more security for crockery: important points where washing up must be done in a small space. The steel bracket is separate from the moulding.

17: Preliminary model for the smallest size of portable radio. The single moulding, which envelopes the instrument, will focus attention primarily on the contrast between two textures, giving full value to the quality of the moulding. The handle, which also helps to throw the sound forward, forms part of the body in a way that is logical for a plastic material. The form is vigorously defined but the easy change from one plane to another will be a help in both moulding and finishing operations.

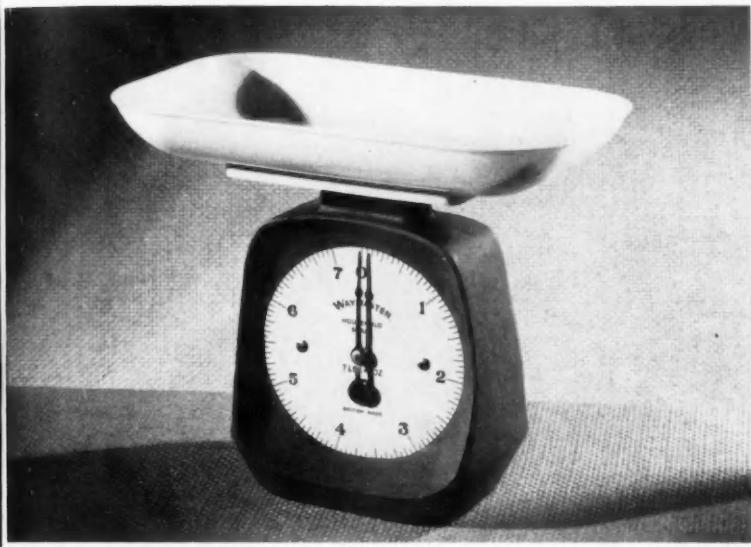
18: Suggested design for a small radio combining a white urea front with a wooden case, so that mould costs are kept down. Two materials, one synthetic and one natural, are in contrast to the benefit of each. A shallow acetate dome covers the dial, the remainder of the front being white urea. The central panel is recessed and has a slight backward inclination. What amounts to a mechanical texture is used for the speaker grille and, although the set is simple to the point of formality, there is plenty of interest due to the changing curve inside the surround. This is a sculptural use of the moulding technique which is very welcome after the usual clichés of trim. This design has been adopted by a manufacturer in Bulawayo, and will soon be in production for sale in Southern Africa.

moulders are possibly competitors of Streetly. The service will deal direct with those who want to buy mouldings, advising them on tools and design, and recommending suitable moulders. Sometimes it is called in for a second opinion on the work of a firm's staff or consultant designer, sometimes for an obstinate piece of detailing. No charge is made for this work, and designs produced for clients in this way are treated as confidential commissions.

Here we have the full expansion of the BIP design policy. It offers technical and design knowledge to help all people concerned with plastic mouldings. This is not an altruistic gesture, for the management

believes that the fortunes of BIP are part of the well-being of the plastics industry. To a large measure these depend on moulded products having a high status in the public mind, which means that a high standard of design must be maintained. A great deal remains to be done. Long and sometimes frustrating educational design will often be necessary, for mouldings are being used by a vast number of people, many of whom will have had no previous experience. As interest increases in the importance of good aesthetic and technical design amongst a wide public, the design policy of BIP should have an influence on British industry that goes well beyond moulded goods.

Some commissioned designs



19

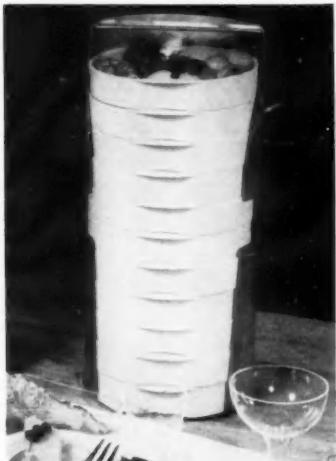
19: A preliminary model in plasticene, using the customer's existing mechanism, dial and tray. The next step is to redesign the dial, for the improved appearance given by the new case will show weakness in the dial design that had not previously been so apparent.

20: The customer sent an example of his normal die-cast calendar stand, asking that it should be copied in plastic with necessary modifications. This design, which bears little resemblance to a die-casting, was at once recognised as being more appropriate to the medium.

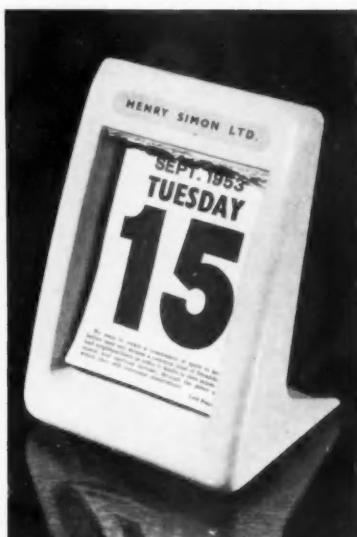
21: British European Airways required to cook meals on the airfield and pack them in a thermos container so that they were ready to serve in the aircraft. These stacking dishes, which nest in the thermos and fit into the service tray, are practical in both sites and comfortable to eat from, the necessary handle being unobtrusive.



A. H. Woodfull
Chief Designer
British Industrial Plastics Ltd



21



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Evolution of the THERMOVENT

THE STORY OF THE THERMOVENT, produced by E. K. Cole Ltd, began when the Cunard White Star Line was making extensive investigations to determine the most suitable type of electric heating apparatus for installation in the RMS *Queen Mary*. After numerous experiments, the new type of electric convection heating was accepted by Lloyds to fulfil the special requirements of freedom from fire risks and the prevention of damage to decorative surfaces by overheating. In addition, the equipment had to operate efficiently and the housing of the heaters to be easily adapted to conform with the design of the luxury furnishings of the giant liner. Although the use of lighter materials and improved engineering methods have resulted in constructional changes in the THERMOVENT heaters, the principle of the system has remained unchanged.

The extension of the range commenced in 1937 when Wells Coates designed the first floor-standing types. These heaters, available in both one kilowatt and two kilowatt models, were housed in phenolic plastic cases and were primarily intended for domestic use. The series proved very popular and remained in production for 16 years. Also in 1937, J. K. White, now chief of the firm's industrial design studios, designed the first inset model, in which the duct

assembly was contained in a sheet metal wall box. In 1945 the inset series was completely redesigned by Mr White and was shown for the first time at the 'Britain Can Make It' exhibition. The models are still produced today unchanged in appearance.

At the same time the THERMOVENT was extended by the introduction of steel-cased models for industrial use and specially designed marine type heaters, which have since been installed in many passenger and merchant vessels. In addition, marine and inset model units are supplied for fitting into cases designed by the architects of the shipping lines and various building projects.

Now, for the first time in 16 years, a major change has been made in the design of the floor-standing models, and the new 'FR' series designed by John Grant and the 'SR' series designed by Charles Ledger, both of the firm's industrial design studios, have just been introduced. The shapes of the new models were the logical outcome of certain mechanical and electrical developments, the chief of which was the saving of weight, achieved in the redesigned heating element itself. This is mounted low in the heater and a corresponding saving had to be found in the weight of the upper part to preserve a low centre of gravity. In addition, a taller air duct had been found desirable, both to increase the airflow, and also to keep the opening of the heater itself cooler. To give stability, to economise in the use of materials and to keep down weight, the heater was therefore given a fairly wide base which tapered to a slim section at the top. The metal back cover follows closely the functional contour of the air duct within, which has itself been kept as narrow as possible.

The plastic front panel of the 'FR' models is of shallow section to economise in tooling costs and is shaped to give maximum strength to the moulding. Since these heaters are exported in parts for assembly abroad, they were designed to take up less shipping space than earlier cabinets. More consideration has been given to the design of the back so that the model should look well when viewed from behind, and to facilitate dusting the metal grille bars have been spaced further apart than previously, and are of a simpler, more robust construction. But the imitation wood grain on the front panel is the one incongruous note. How much better these models would have looked if the plain finishes of some of the other heaters had been used, or a suitable form of decoration had been developed that would more directly express the quality of the material. Experiments along these lines would make a valuable contribution to the development of this and other industrial products.

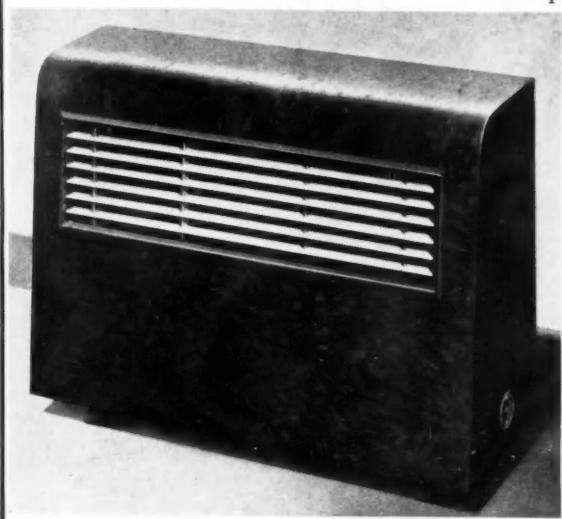
1: This first floor-standing model was designed in 1937 by Wells Coates. The case was made of phenolic plastic and was finished in black or imitation walnut. Originally the grille bars of the heat outlet of some models were made of glass rods, but were later changed to anodised aluminium. This, and the changed position of the controls from the front to the side of the heater, were the only alterations in the external design during its long production run.

2: One of a series of inset models designed in 1937 by J. K. White, now chief of the firm's industrial design studios. The duct assembly was contained in a sheet metal wall box and the plastic front panel was available in black, imitation walnut or ivory with metal grilles for the air intake and heat outlet.

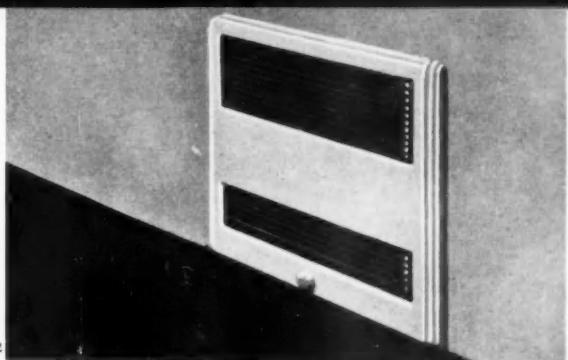
3: The standard inset model redesigned by J. K. White in 1945. The front panel is made up of three plastic sections separated by metal grilles, which simplified production, packing and assembly. A concealed lamp gives a warm luminous glow which floods the grilles and also acts as a pilot light.

4: THERMOVENT units are also used by architects who prefer to house the heaters in cabinets of their own design. This example of a marine floor-standing model incorporating an automatic cut out was designed for the Orient Liners **Orcades** and **Oronsay** by Brian O'Rorke.

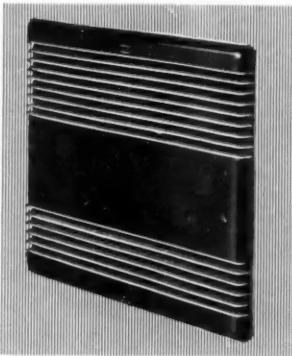
5: This marine heater, designed by J. K. White in 1947, is one of the most satisfying in appearance. It has a mild steel case and stove-enamelled ivory finish with an anodised aluminium grille.



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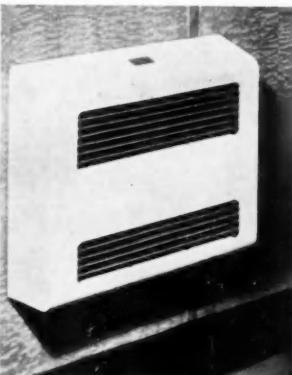
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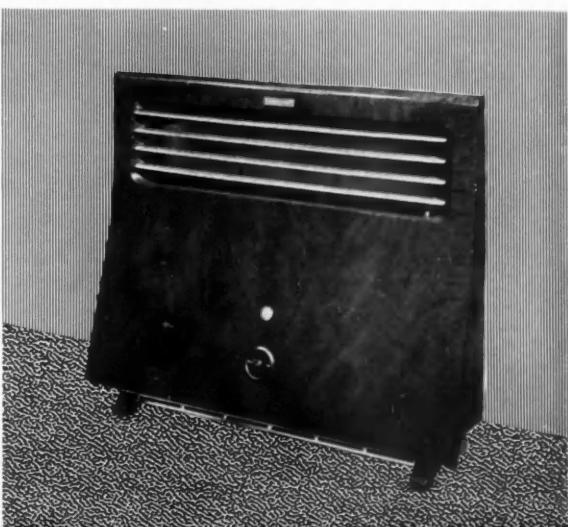
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6: One of the new 'SR' series recently designed by Charles Ledger of the firm's studios. Models are available in one, two or three kilowatt versions and have metal cases finished with high-gloss, light bronze stove enamel. Though primarily intended for commercial and industrial use the simple shape and good proportion make them suitable for domestic application.

7: One of the new 'FR' series of floor-standing models recently designed by John Grant, of the firm's studios. The chief feature of these models is a larger and more efficient duct and element system, providing a considerably increased circulation of air through the heater and a lower outlet grille temperature. The plastic front panel has an imitation walnut finish. A plain surface or a specially designed modern pattern would have improved the appearance.



Current Design for Christmas gifts



The items shown are up to the standard acceptable for 'Design Review', the photographic index of current British products, to be seen at the London headquarters of the Council of Industrial Design.



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1: A free-shaped earthenware pot for small indoor plants. With the more exotic varieties, trained on the strings, the African-Picasso decoration would be barely distinguishable. Designer and maker: William Newland.

2: Light-weight trolley supporting white-wood trays with raised rim. The design of the structure allows the lower tray to be fully accessible. Maker: Koltov Products.

3: Cases with soft tops made light in weight with coverings of checkered leathercloth. The leather handles have soft undersides for a comfortable grip. Maker: J. B. Brooks & Co Ltd.

4: Travelling beauty case in ivory hide and coloured rayon linings. The polythene bottles and jars with star and stripe decoration were specially designed. Designer: John Waterer. Maker: S. Clarke & Co Ltd.

5: Occasional blue and ruby glass dishes with an incised geometrical pattern of thin gold lines. Maker: Chance Brothers Ltd.

6: Deep stoneware salad bowl, hand-made with rough textured finish on the outside. The decoration is in grey, black and white with other colours to choose from. Designer and maker: N. Vergette.

7: Bulbous but graceful, this jug serves a set of four soup dishes. The design is in earthenware with a green glaze or other colours on the outer surface. Designer: Marion Ehlers. Maker: Ehlers Pottery.

8: Mugs, cups and saucers moulded in Melamine. The substantial thickness of the plastic, shown clearly in the soup plate, gives weight and strength. Maker: The Streetly Manufacturing Co Ltd.

9: Woodware for table use need not be turned on the lathe. The decorative grains of walnut, cherry, pear and lime are available in these shapes. Designer and maker: David W. Pye.

10: Simple in line and form, this toast rack and sauce boat should do much to increase the popularity of stainless steel for tableware. Maker: J. & J. Wiggin Ltd.

11: Decoration can make flatware obsolete or just uncomfortable to hold. On these EPNS items, the reverse is true owing to the constant, tapering flutes. Designer: Sir William Crawford & Partners Ltd. Maker: Latham & Owen Ltd.

12: Known as 'condiment puffers' and made of polythene, the generous tapering form of these cruetts encourages squeezing. The design ensures that the salt runs free from condensation. Maker: Bancroft & Partners Ltd.

13: Clear soda lime glass has been hand-blown to form the tall vase or container and the scent bottle. They can be clear or coloured and the scent bottle gains in interest from the twisted tubes applied to the outer surface. Designer: Fritz Lampl. Maker: Orplid Glass Ltd.

14: Mechanical precision adds to the grace of these cuff links with their hinges and clips. They have been carried out in gold with engine-turned decoration in slight relief. Designer and maker: K. Weiss Ltd.

15: Ash and pin trays with lighthearted sgraffito decoration in the current idiom which is based on cave paintings. A white, opaque glaze with blue and brown added, has been laid over an earthenware body. Designer and maker: Ann Wynn Reeves.



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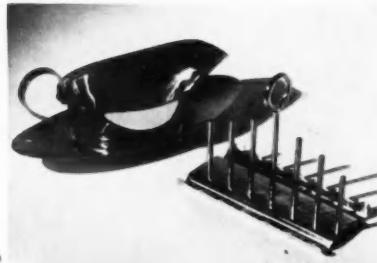
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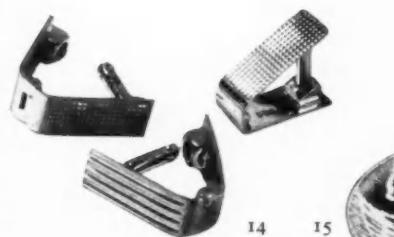
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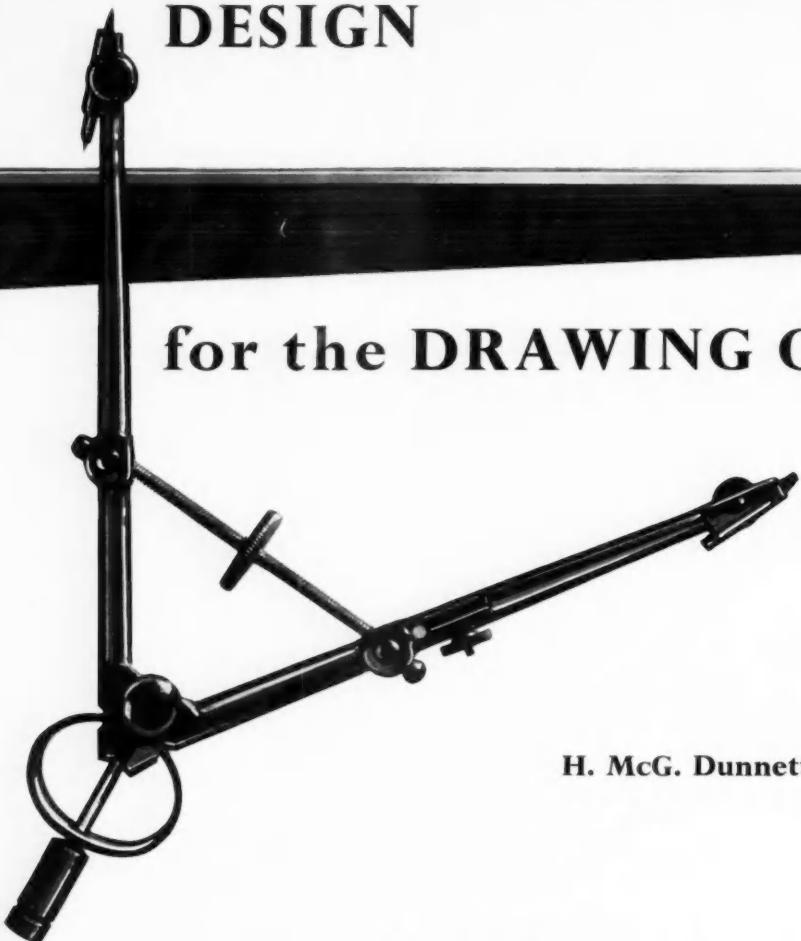


15

DESIGN

for the DRAWING OFFICE

H. McG. Dunnett



A manufacturer who interests himself in the problems of industrial design may do so for a variety of reasons. Sometimes this interest is part and parcel of his upbringing, so that the effort required to produce a good standard of design seems a natural part of his job. On the other hand an interest in the subject may be forced upon him by more progressive competitors. E. N. Mason & Sons Ltd is one case of a firm which studies the changing market and sees in better product design a new and practical weapon in its sales armoury.

E. N. MASON & SONS LTD SPECIALISES in the manufacture and marketing of all forms of equipment and materials used in the drawing office. Besides developing equipment needed for different methods of plan reproduction, the firm produces drawing office

furniture, which has led in turn to the manufacture of general office furniture as well.

The firm was founded in Colchester in 1905 and, after various moves in the course of the next thirty years, in order to keep up with expansion, finally

settled in 1937 on the site which it now occupies on the outskirts of the same town. But settling down did not signalise the end of expansion. It became more rapid and more frequent than before, though now there is ample space in which to do it. Already the firm is probably the largest of its kind in Europe.

In the early days the blue-print, produced by means of the electric arc-lamp, was the standard method of plan printing. From there the first development in 1921 was the production of sensitised papers for plan printing, followed three years later by the first ARCLIGHT photo-copying machine. In 1932 a wood-working department was opened for the manufacture of drafting boards, tee-squares, set-squares and similar drawing-office equipment, and its functions rapidly extended to the production of drawing office furniture, to components for the photo-copying machines and then to large industrial camera projection machines. The photographic side was extended in 1942 to include complete ranges of photographic materials and dark room equipment, and later to the bulk production of photographic chemicals.

Changing conditions

Throughout this period of progress, and in common with the majority of other manufacturing firms in this country, industrial design did not come into the picture, either as a factor in production or in marketing. Since the war, however, the situation has altered for reasons which are both interesting and logical, and because the change is organic it looks eminently sound.

Before the war the position of draughtsmen in the engineering industry generally was not a very enviable one. During the war conditions changed, and a glance at the 'Situations Vacant' columns of the daily press and of the engineering journals of 1946 and onwards makes it evident that the supply of draughtsmen is far short of the demand. Whereas before the war any room with a north light was considered good enough for the drafting office, engineering firms now find that, in order to maintain the necessary and increased staff of draughtsmen, first-rate conditions must be offered.

Many up-to-date drawing offices have therefore been built or converted and enormous trouble has been spent in evolving ideal working conditions in terms of lighting, heating, ventilation and equipment. Since plan reproduction equipment is a normal part of the drawing office in this country, the changes have also spread to this section.

Mason's has therefore approached the better design of its equipment for sound reasons. It considers that, in designing a drafting table or plan printer, the trouble and effort inevitably expended in developing prototypes down to the last detail is well worth while. The firm has concentrated on designing equipment that will achieve high standards in function, maintenance and appearance.

Export problems

The various machines, and their development over a period of years, are considered separately at the end of this article, but there are certain aspects of design policy which are of interest here. In the first place, in common with most other industries, the firm has since the war developed its export trade. But the models produced for the home market were generally unsuitable for export. The ideal machine for most of their overseas markets was a simple, solid, inexpensive foolproof appliance which would stand up to handling by very inexperienced workers, whereas in the case of photo-copying machines for the USA, a much larger type of machine, which operated continuously, was required. In the USA photo-copying is almost universally carried out by specialist firms of 'blue-printers'. Even the largest plants use these services in preference to the system which prevails in this country and on the Continent of having their own print-rooms with machines of a smaller capacity in accordance with their individual needs. An almost crude machine thus satisfies the needs of the first market whereas the second, as matters stand at present, can only be met by a highly complicated, fully automatic machine of the continuous production type, represented by the new Mason 'Mercury' electronic machine, the first of its kind to be produced in this country.

Secondly, Mason's develops its own designs within the organisation. It does not employ an industrial designer as such, nor does it employ one in a consultant capacity. There seems to be no one particular reason for this, though the situation seems to owe much to the self-sufficiency of the organisation, its youth and its self-confidence. It has, since the war, gradually worked out a design system of its own based on a 'Design and Development' committee. This committee consists of the managing director, the general sales manager, the chief research chemist, the engineering works manager, the physicist, and the development engineer, who is head of the design and development department. The first important

point is that the managing director is the keenest protagonist of good industrial design, while the general sales manager sees in it a valuable means to greater sales. Such arguments on the subject as develop are the understandable ones between the sales department which wants something new to show and talk about, and the production department which wants to go on producing the machines, which it is geared to produce, unchanged for the longest possible period.

Functional designs

Ideas are invited from everyone, but once decisions are taken the development engineer has the responsibility for implementing them and for carrying out the drawings, mock-ups and prototypes. Improvements in function are always the starting point in new designs; never has re-design been merely a process of 'styling'. An interesting aside, bearing on the composition of the committee, is that the scientist members have apparently brought unexpected but extremely valuable and disinterested criticism to bear on all manner of detail, not only in questions of materials and techniques – so often the jealously guarded province of the engineer – but also in matters of appearance design. When non-chemical equipment has to be designed, such as office and drawing office furniture, a member of the staff is employed who has had experience of display and similar problems.

Some may feel that there are shortcomings both in designing by committee and in not employing an industrial designer experienced in the subject. Nevertheless it must be remembered that the company is well satisfied with the results achieved, while, secondly, it is unlikely, considering the rate of development in recent years, that the firm's design policy has reached finality. The way design has developed in the firm has much in common with trends in the precision instrument industry. The production of drafting equipment is, after all, a precision job, and on a much larger scale drafting stands, photo-copying machines and industrial photographic reproduction machines are very much akin to precision instruments.

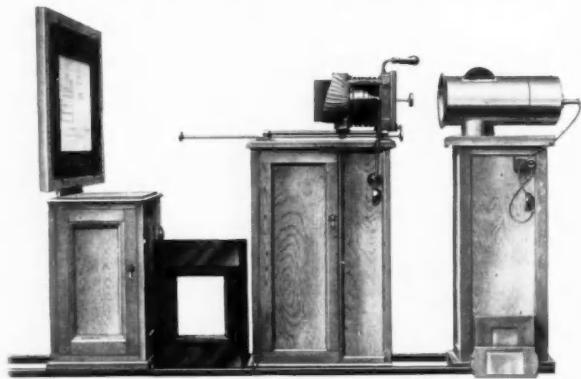
DRAFTING STANDS

1 and 2: Two versions of a drafting stand. The first model was produced in 1936 while the second is the company's latest design produced in 1953. The essential qualities required are rigidity of the stand and of the board, simple ways of adjusting the board and an easily operated lock and release device. In the early model a heavy cast-iron frame has been used, the adjustment mechanism being operated by a crank and chains. The frame of the 1953 drafting stand is a well-formed simplified pressing evolved from careful tests to determine the minimum structure necessary for rigidity. A counter-balanced movement has been introduced, while the lock and release device is foot-operated. The board is mounted on a welded steel frame which is integral with the stand, eliminating all unnecessary movement. The drafting machine itself is a precision instrument equipped with micrometer adjustment and trigger control to pre-selected angles.



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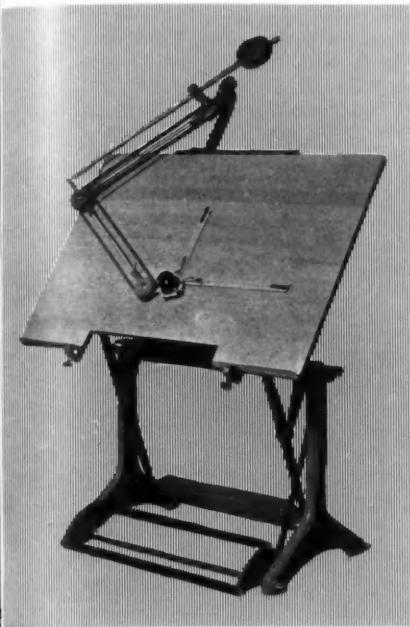
EVOLUTION OF THE 'BARCRO' INDUSTRIAL PHOTOGRAPHIC



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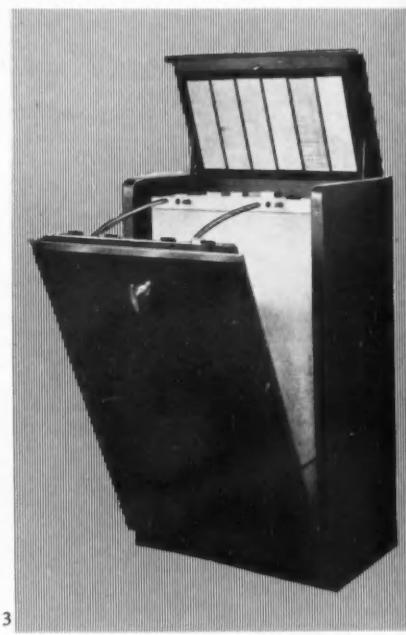


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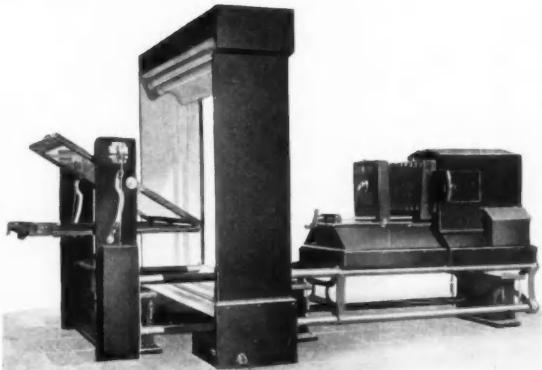
A VERTICAL PLAN-FILING CABINET

3: The ARCLIGHT vertical plan-filing cabinet which will accommodate up to 600 plans, was evolved to overcome the inherent disadvantages of a normal plan-chest by adapting the principles of up-to-date office filing systems to a much more cumbersome problem. Although plan-chests are effective for storing purposes, indexing is not easy. Also it is difficult to extract a plan without disarranging the others and it is even more awkward to put it back again in its correct place. Frequent thumbing through them also tends to turn up corners and if they do not lie flat the drawer is often difficult to shut, while a drawerful of plans is quite a heavy object to handle. In the new cabinet the plans hang in special holders to which each plan is attached. These have holes into which the curved rods fit, two of which are fixed to the back and two to the hinged front. To extract a plan, all those in front of it are pulled forward so that they are transferred to the rods on the hinged front, while the selected plan and all those at the back remain on the rods attached to the back. The underside of the lid is designed to take a plan index system. The cabinet, when closed, is dustproof, and takes up less floor area than a plan-chest, a valuable factor when many cabinets are required.



3

PHOTOGRAPHIC CAMERA AND PROJECTION UNIT

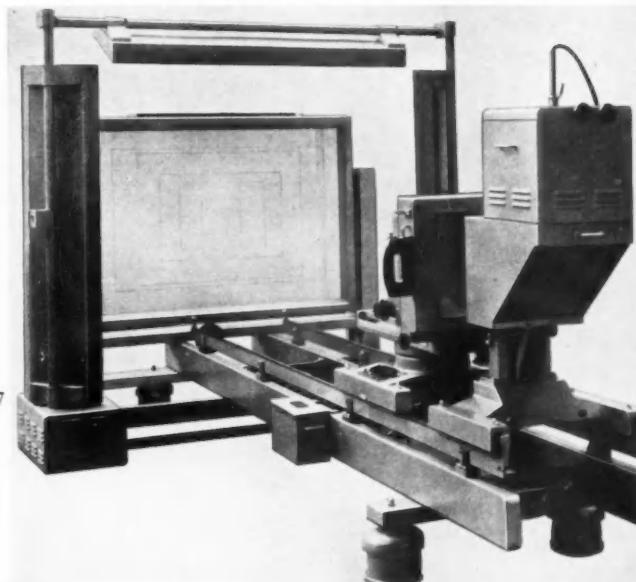


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4: This first model, dating from 1933, comprises little more than three wooden cabinets mounted on rails, in addition to the elementary photographic equipment. Adjustment was by hand, the cabinets being pushed along the rails.

5: The subsequent trend of design, as increased size and technical improvements were introduced, was towards a substantial piece of engineering equipment. Although this 1937 version was still made mainly of wood, the change is quite startling, but it is still very much a combination of three separate units with the carriage rails on the ground.

6: In the 1943 model, the adoption of a new type carriage gives this model a much more unified appearance. It is now clearly an engineering product although still made of wood.



7

7: The first model of all-metal construction was produced in 1953. It is precision-made, the complicated carriage indicating how the need for accuracy has become the major problem in design. It is used for the reproduction of maps, drawings, documents and diagrams up to 60 inches by 40 inches in size. It is adjustable in all necessary directions, is equipped with fluorescent lamps, and has an electronic timing control device for projection exposure.

PLAN PRINTING

Basically, plans are printed by interposing a master tracing between a sheet of sensitised printing paper and a light source. The printing paper and master tracing are kept in contact with each other by means of a 'blanket' in the machine, to ensure even printing. After exposure, the print is treated with an appropriate developing agent. The two main processes of plan printing are 'blueprinting', the original method, for

which an arc lamp was and still is used, and 'dyeline' printing which produces the opposite effect - a dark line on a light background. There are now several types of light source available in addition to the arc-lamp, including fluorescent lamps and mercury vapour lamps, both of which operate off normal voltages, and high pressure quartz tubes. In addition to the ferro-prussiate chemicals used for blueprints, there are

also several developing processes for dyeline printing such as neutral, alkaline and ammonia vapour. In general, the process adopted will depend on the type of master tracing to be copied, on the type of print required and on the output of printing that is economic. The rate of printing may vary from periodical use in an architect's or surveyor's office at a relatively slow reproduction speed to continuous production in a specialist plan printing office, where the most rapid printing and developing processes on an automatic machine are required.

TWO SMALL PLAN PRINTING MACHINES

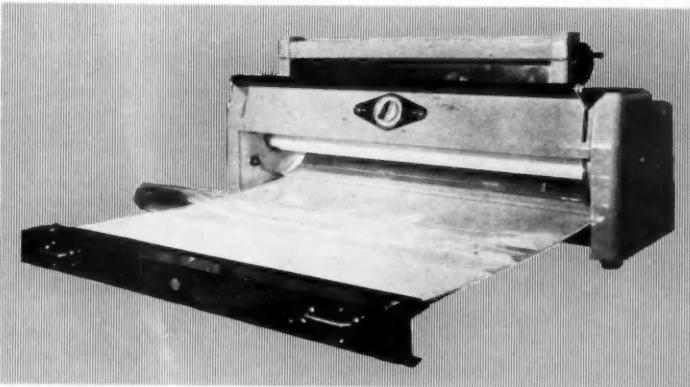
8: *The wall-type plan printer, designed in 1924 and still in the catalogue, illustrates one of the simplest and least expensive types of machine. It is shown without its top and end covers. The printing paper and master tracing are laid on the glass curve and the 'blanket', which can be seen hanging down in front, and is then clipped over the pins at the top of the curved glass screen. The hand-operated winder on the right of the machine enables the suspended arc lamp to traverse sideways inside the drum, against an airbrake escapement fan. Development is carried out in separate apparatus. This machine suitably illustrates the basic operations, but in spite of being eminently serviceable for one class of work it is devoid of any pretensions to good design.*

9: *A useful comparison is the 'Apollo' combined plan printer and developer, a small, neat, inexpensive, dyeline machine produced this year. It is contained in a moulded plastic case, and is shown here with the feed tray, formed by the blanket, open. The transparent PERSPEX blanket cover, under which the master tracing is laid is partially turned back. When the tray is closed, the blanket wraps itself round a transparent cylinder, which is just visible, and the exposure is made by a fluorescent tube. This enables the cylinder, and thus the machine, to be much smaller. On top of the printer is a roller developer, through which the print is passed, with a tray containing the developing fluid. Pressed steel is used for the internal frame and moulded PERSPEX for the case which largely follows the shape dictated by the operating parts. The only discordance in the design is apparent in the developer on the top, since it does not appear entirely integrated with the rest of the machine.*

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LARGE PLAN PRINTING MACHINES

10: Produced in 1929, this single-sided machine was designed as a continuous plan printer with arc lamp illumination.

11: This double-sided machine was produced in 1935. The main additions are the sheet metal enclosures at the top and sides and a new sheet metal receiving trough. Note the standard type fuseboxes crudely attached to a wooden panel.

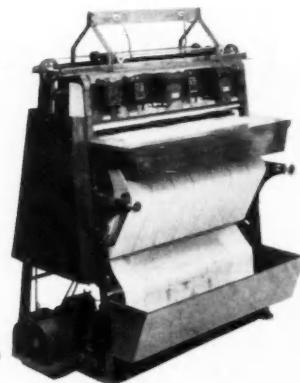
12: In 1940, pressings were introduced for the frame and side panels in this comparable, single- or double-sided design, and a

simplified form of enclosure panel was evolved for the upper half of the machine. A rather self-conscious colour scheme added to the scrappiness of the design and the honest, functional character of the 1929 machine vanished.

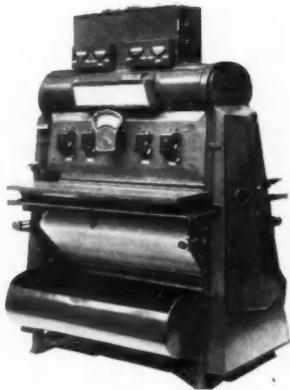
13 and 14: The 1953 'Mercury' Reproduction unit is equipped with an electronic control for printing and developing automatically in a continuous operation. The need for total enclosure was dictated firstly by the use of a mercury vapour quartz tube in one version of the machine - the alternative version having three standard voltage mercury vapour lamps - and

secondly by the inclusion of a photo-electric cell scanner. This judges the printing requirements of each tracing and operates an electronic control which regulates the speed of printing. Both frame and casing are assembled from pressed steel parts while the end panels are hinged with recessed handles. The developing machine is incorporated at the back, and is geared with the printing machine and with a print drying device. The used master tracings are deposited into a tray at the front and the completed prints into another tray at the back. The finish is hammered grey stove enamel. This design is by far the most coherent of the four.

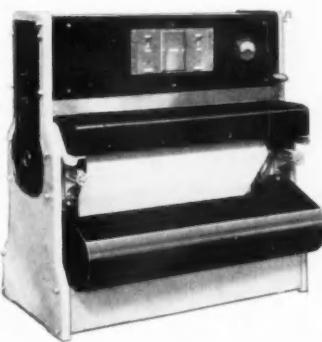
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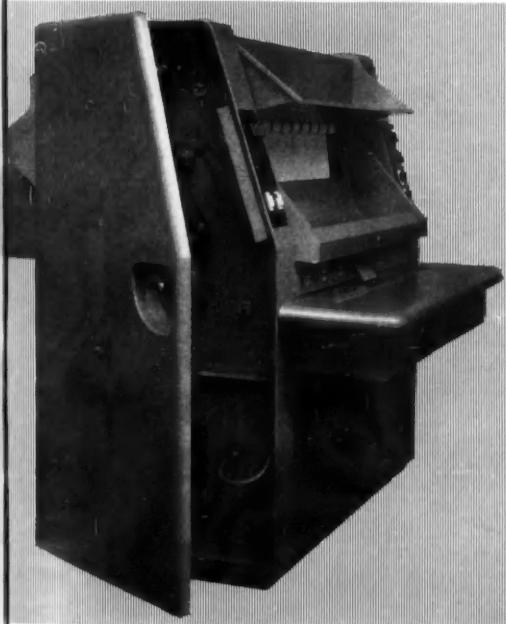
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GLASS FIBRE:

Glass is one of man's oldest materials, yet it is only in the last few years that its use in industry has been widely extended by the development of glass fibre reinforced plastics. The following article describes the method of making glass filaments and shows how this important new material can be applied in the manufacture of products where resilience and strength are necessary.

FIBROUS GLASS IN TEXTILE FORM has been available in Great Britain since 1938 and has found important uses in many industries. Although glass fibres were known to the ancient Egyptians, who made drinking vessels by the spiral winding of glass threads, it was not until the economic large-scale production of fine glass filaments just before the last World War that the possibilities of this flexible glass in product design became apparent.

Glass fibre yarns are made today in two distinct forms – continuous filament, which has a silky smooth appearance, and staple filament, a discontinuous yarn which is rather hairy like worsted. We are concerned here with the first of these which is the more important product at present. It is made from silica, modified by alumina, borax and other ingredients to improve the weathering resistance and lower the melting point of the glass to help in the formation of



Design: Number 60

A new medium for designers

H. V. Blake

fibre. This mixture is melted in a large furnace and formed into marbles. As marbles the glass can be most conveniently fed automatically into the fibre forming process.

The continuous filaments, which are made in three different sizes with diameters of .00021 inches, .00028 inches and .00035 inches, are drawn from a rare metal, electrically heated crucible, having either 102 or 204 drawing nozzles in the base. The emerging molten glass thus produces one filament from each nozzle. The filaments are gathered together at a V-shaped pad, where they are lubricated by a special size, and are passed downward to a high speed spindle and wound at a speed of over 60 miles an hour. The wound strands of filament are then twisted and doubled into yarn, and woven in the ordinary way into cloth. Glass fibre textiles provide an inorganic fabric with excellent heat resistance, high tensile strength, very good electrical properties, low moisture absorption and good chemical resistance. Glass filaments, however, do not combine well together, and unless the fabric has been specially treated, their abrasion resistance is lower than the more commonly used organic fibres.

Plastics reinforced

During the post-war period a new and exciting use of glass fabrics has been developed — glass fibre reinforced plastics. The aircraft industry first married the high tensile strength of glass filaments to the easy moulding properties of the polyester group of resins, and produced a new structural material as strong as steel and lighter than aluminium.

1: Glass fibre continuous filaments are drawn by melting glass marbles and feeding the molten glass into a rare metal, electrically heated crucible. The crucible has 102 or 204 nozzles in the base through which the molten glass flows. Filaments are drawn from each of these nozzles on to a high speed spindle at about 60 miles an hour. One glass marble produces about 100 miles of single filament.

2: The individual strands of glass filament, after forming and winding into 'cakes', are transferred to normal textile spinning frames where they are twisted and doubled into yarn for subsequent weaving into cloth and tape.

Glass fibre used to reinforce plastics can offer very great advantages to designers in industry, because it gives plastics for the first time two tremendous gains — shell strength, and the ability to be formed at low pressures. No longer must the advantages of plastic materials be confined to small articles needing comparatively little strength, for the development of reinforced plastics makes it possible to contemplate moulded structures up to 100 feet in length and of immense strength.

Glass fibre polyester mouldings can be made without any external source of heat or pressure, although hot curing resins and matched pressure moulding tools are often desirable to speed up the manufacturing process and, in some cases, to improve the physical properties of the article. Other resins like the epoxies, melamines and silicones are also used to give special properties, whilst the development of low pressure phenolics may well help to bring down costs — an important aspect of the future development of this new structural material.

Many yachtsmen are already familiar with the small glass fibre boats that have been made recently. Here the material gives a permanently coloured, leakproof hull of great strength and light weight, that does not need repainting and caulking, and is proof against boring worms. Hulls up to 40 feet in length have already been made, and much larger boats are being considered. But the most interesting development so far is the use of the new material for the bodies of motor-cars. At present, however, the use of reinforced plastics must be confined to relatively small-scale production models, though the development of high speed production techniques cannot be long delayed. There is, of course, much greater scope for body designers with this new material, since it can be easily moulded into compound shapes that would be impossible with metal pressings.

At the recent 'Motor Show' at Earls Court, considerable interest was aroused by the appearance of the first British production sports car by Singer Motors Ltd with a glass fibre reinforced plastic body. In addition some glass fibre plastic panels were incorporated in the sports cars shown by Jenson Motors Ltd and the Standard Motor Co Ltd, whilst



the 'hard top' for a TRIUMPH model was also manufactured in glass fibre reinforced plastics. A sports car by Jowett Cars Ltd was partly made up of laminated plastic panels in which glass fibre was used as reinforcement at the points of stress.

Methods of construction

The methods used at the present time to make either complete bodies or motor-car body parts are similar to those already developed by boat builders for small craft. The basic requirement is a mould and this is usually made from a plaster or wooden 'mock up'; the mould itself being made either of aluminium alloy or, quite often, of a glass fibre laminate. In the latter case the mould is made by using the 'mock up' as a male mould on which layers of glass fibre, chopped strand mat, or woven cloth, are laid. They are impregnated with resin and allowed to cure, generally at room temperature.

A release agent consisting of a high quality wax polish or one of the silicone waxes is first applied to the inner surface of the mould and a heavily filled and pigmented polyester resin mixture is then spread on and allowed to set like jelly. At this point the glass fibre reinforcement, which is generally an unwoven, chopped strand mat previously cut to shape, is laid in the mould and well rolled into the resin. More 'filled' resin is applied with a brush and worked into the mat and further layers



3: A moulded glass fibre car body on a BUCKLER chassis made by the Galt Glass Division of Durasteel Ltd. The ease of moulding this material also enables much larger single shapes to be produced than with metal. In some cases the whole of the front half of the car, including bonnet and wings, can be made in one moulding, hinged at the scuttle and light enough to lift in one piece for access to the engine and front suspension.

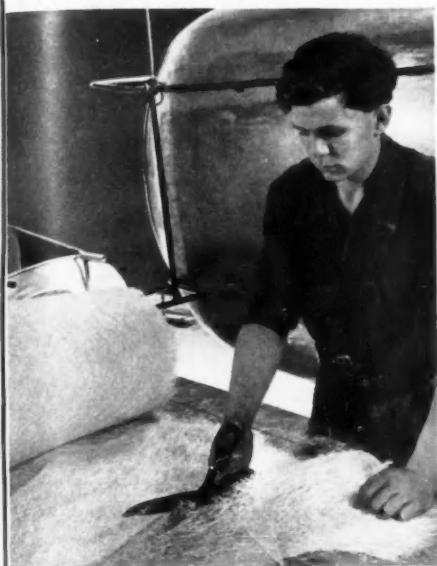
4: The SINGER 'SMX' sports car will be in production next year exclusively for export. Polyester resin reinforced by glass fibre is used throughout for the body shell which is moulded in five sections. The complete front section, consisting of the bonnet and wheel arches is moulded in one piece. It is hinged to the front cross member and swings open to give access to the engine.

5: In the prototype of the JOWETT R 4 'Jupiter' sports car exhibited at the recent 'Motor Show,' some of the panels are made of a laminated plastic with some woven glass cloth reinforcement at the points of stress. Eventually the complete body will be moulded of reinforced plastic and the car will be in production early next year.

6: The CHEVROLET 'Corvette' sports car, now in production with a glass fibre reinforced plastic body, is at present manufactured by the pressure bag technique, but in the future matched steel moulds will be used. The mat and resin will be pressed and heat cured at pressures up to 150 lb per square inch and at a temperature of 140°C; the entire moulding cycle taking only three to four minutes.

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of woven fabric are laid up and impregnated in a similar manner, the entire moulding then being allowed to cure.

The curing time will depend entirely on the resin formulation used, the amount of catalyst employed and whether or not it is required to speed up the process by using heat. Generally speaking, for small-scale production, it is possible to cure a moulding made with a polyester resin in six or eight hours at room temperature. When the complete moulding is lifted out of the mould, any slight surface defects are made good by rubbing down and filling. The moulding is finished with cellulose enamel which is essential for the high gloss finish generally required on motor-car bodies. It is possible, however, to pigment the resin and in the case of boat hulls, a white pigment is often used giving a porcelain like finish without the need for painting.

Mass production techniques

This method, called the 'single mould' or 'wet lay up', is the one most commonly used today for small-scale production. But, if only one body is required, it is possible to start by using a plaster male mould on which glass fibre reinforcement (either cloth or mat) is laid and impregnated. The outer surface of the moulding, however, is rough and considerable rubbing down and filling is necessary before a good finish can be obtained. But these methods, although easy to carry out, and requiring little capital cost in the way of tooling, are too slow, and occupy too much space, for large-scale production. In the USA a CHEVROLET glass fibre car body is planned, using a large number of matched metal moulds. In these, glass fibre mat, impregnated with resin, will be moulded at



7: The present method of making car bodies and boat hulls is called the 'single mould' or 'wet lay up' but is only suitable for small-scale production. Here unwoven, chopped strand, glass fibre mat is being cut to a pattern ready for laying in the mould.

into the resin and further coats of resin and glass fibre are applied.

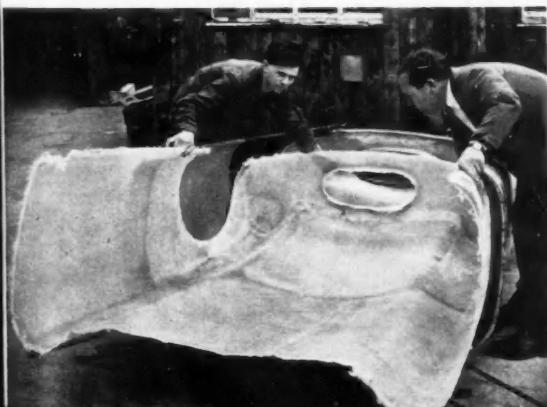
9: The moulding is allowed to cure for six or eight hours at room temperature before it is lifted from the mould. Defects are removed by filling and rubbing down.

8: Before applying the mat the inner surface of the mould is first coated with a release agent, followed by a layer of polyester resin which is allowed to set like jelly. The glass fibre mat is rolled

10: The completed moulding is finished with cellulose enamel, though a pigment may be added to the resin mixture allowing the quality of the material to make its own surface texture.

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pressures up to 150 lb to the square inch, and cured by heating the moulds to a temperature of about 140°C. In this way complete mouldings can be made in three or four minutes but, of course, a much higher tooling cost is involved.

New applications

The aircraft industry pioneered the use of laminated glass fabric because it offered their designers an easily moulded, high strength shape. It was also transparent to radio waves and could be used for covering radar aerials. Since then its use has spread to wing tips, flooring, window frames and air ducts, but no load bearing parts have yet been made in plastic material, although much experimental work has been done. In this respect the glass fibre suffers from the disadvantage that in its usual form it is not so stiff or rigid as light alloys or steel. The glass reinforcement can, however, be orientated within the laminate in such a way that a much greater stiffness can be obtained in the direction in which it is required. Once certain bonding problems have been overcome, it seems possible that the glass fibre aeroplane structure will become a practicable proposition.

There is clearly a very wide scope for glass resin moulding in the domestic field, ranging from refrigerator, washing machine and vacuum cleaner parts to light-weight, scuff-proof luggage. The attractive fibre pattern can be put to good use in moulded lamp shades and in moulded chairs, which are considerably more comfortable than they appear. The material is extremely well suited to outdoor furniture. Decorative translucent screens for partitions or enclosed wall lights offer great possibilities; the almost unbreakable material being used either in flat sheet or reeded form. Here again the fibre pattern provides an unusual texture when lit from behind. Corrugated translucent sheet is employed for roof lights, verandas and greenhouses and in these cases there is the added advantage that expensive supporting framework is not needed.

11: This chair designed by Charles Eames and manufactured by the Zenith Plastic Corp, U.S.A., makes good use of the new material. The shape and cross section of the moulding have been carefully designed to give the greatest comfort and resilience at the right points. It is moulded by the flock, pre-form, matched metal die technique and is made at the rate of 300 per day. The surface is left untreated, the fibre pattern being allowed to show.

12: This luggage made in the U.S.A. is a good domestic application of the new material. It is mass-produced by a technique borrowed from the felt hat industry whereby glass fibres are chopped into two-inch lengths and sprayed on to a shaped, perforated metal grid. The fibres form themselves into a mat which is then lightly bonded with a quick curing resin and transferred to a pair of matched metal moulds.

13: Glass fibre unbonded mat or woven fabric impregnated with low pressure, cold curing, polyester resins have made possible the high strength boat hulls such as this racing yacht moulded by Necolam Ltd. The material has very high impact resistance, is completely waterproof, is self coloured, and therefore requires no painting, and is proof against marine boring worms. It is also considerably lighter than traditional timber or metal construction.

14: UNDULITE, a translucent plastic sheet, has been reinforced by glass fibre and is made by Ashdowns Ltd. By using a lightweight, unbonded mat moulded by contact pressure with a polyester resin, and by using a high resin content and a slow cure, a light transmission value of over 80 per cent can be obtained. At the same time the material has much greater strength than unreinforced acrylic sheets.

NEWS

W. J. Bassett-Lowke

The death of W. J. Bassett-Lowke at the age of 76 has come as a shock to his many friends if only because his energy, boyishness and vitality seemed as fresh as ever. So many generations of schoolboys have regarded Bassett-Lowke as the king of model makers that it came to many of us as a surprise to learn that W. J. was the original founder of the firm. His father was an engineer and boilermaker. The young Bassett-Lowke left heavy engineering to develop his hobby into a world-famous business. That was in 1899. Few men can have had more 'fun' from their profession, which probably accounted in part for his perennial youthfulness.

The real engineer in Bassett-Lowke was responsible for the insistence on scale models and also for the standard of genuine craftsmanship which is commonly absent in the world of modern toys. The current widespread loyalty, not to say fanatical devotion, amongst so many adults to locomotives and railways probably owes much to Bassett-Lowke. His interest, however, ranged far beyond the design of locomotives and railway systems in miniature. On his regular visits abroad he followed the development of modern architectural trends with enthusiasm. He was one of the first Englishmen to commission a private house in what was then considered the revolutionary 'modern style' and for this purpose he invited Peter Behrens to design his 'New Ways' in Northampton. He became a very early member of the Design and Industries Association, which soon had a branch in Northampton, and was always a driving force in the councils of that body.

His greatest personal attachment was probably to ships. His firm is particularly famous for the small 'waterline' models, but its larger scale models are to be seen in almost every shipping office. The Admiralty found a practical use for such modelling skill in the last war. As an inveterate traveller Bassett-Lowke seldom missed the maiden voyage of any new liner, and was as quick as anyone to pick out the good points in design wherever he found them. Certainly no more stimulating companion could be desired on a holiday and all who knew him will miss his vigorous but always kindly conversation.

N.L.C.

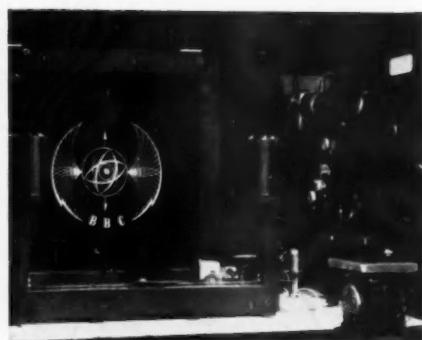
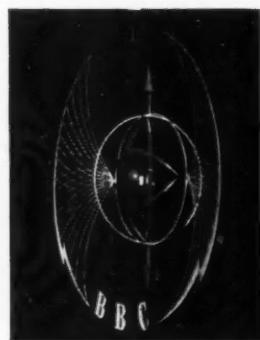
China for an hotel



This new china is part of a service which has been specially made by Doulton & Co Ltd for the Berkeley Hotel. The initial B has been incorporated into the moss green 'on-glaze' pattern designed by Monica Ford, a graduate of the Royal College of Art.

British TV symbol

These photographs show the filming of the new symbol in preparation for use regularly on the BBC Television Service. The symbol has been designed to create a pattern of movement in three dimensions. The central feature consists of two eyes, which revolve in opposite directions, within a revolving circle symbolising the earth. In addition there are two arcs of light which move across from the outside wings towards the centre. Curved lines have been used extensively in the design to avoid conflict with the horizontal scanning lines which make up the television picture. The structure, of brass suspended on wire, was designed by Abram Games. The model was made by F. Johnson.



German competition for a TV symbol



A surprising similarity of motif can be seen in these prize-winning designs for a symbol to be used on the German television service. Of the 600 designs submitted, however, only about 14 were considered at all suitable. The first, second and third prizes, from left to right, are by Günter Böcker, a student of the Dusseldorf industrial school, K. H. Franck and Walter Bergmann.

Packaging competition results

Details have been announced of the winning entries in the British Paper Box and Carton Design Competition (DESIGN July pages 35-36 and September pages 33-34). The competition for the design of various types of boxes, cartons and labels, was organised by the British Paper Box Federation and the British Carton Association in co-operation with the Institute of Packaging, the Society of Industrial Artists and the Council of Industrial Design. Of the 43 sections, 41 were devoted to packs which were already in production or on order at the time of the competition. No first prize awards were made in 16 of the sections and there were no entries for a further six sections. Only two sections were devoted to new designs, one of which was for students. The first prize in the 'New designs (general)' section was won by the Metal Box Co Ltd for a shaped

confectionery carton designed by G. H. Streeter. Alan E. Gatland, of Gravesend School of Art, won the first prize in the student section for the design of a carton for an egg slicer. Complete details of the competition winners can be obtained from the Secretary, the British Paper Box Design Contest, 27 Chancery Lane, WC2. An exhibition of the prize-winning designs was held during October.

Design competitions

Details have been released of the 1954 'Drawing and Handicraft' competitions arranged by the Institute of British Carriage and Automobile Manufacturers in association with the Society of Motor Manufacturers and Traders, the National Federation of Vehicle Trades and the Worshipful Company of Coach Makers and Coach Harness Makers of London.

The five design competitions are for a long-distance touring saloon to seat four persons in addition to the driver, a four-door light saloon of monocoque construction suitable for mass-production, a two-door, two-seater enclosed racing car, a single deck luxury coach of monocoque construction and a general delivery van. In addition there are two competitions in the handcraft section for the construction of a model of a front bulkhead frame for a single deck bus and of an all-metal door for a sports car. The organisers emphasise that the designs should be practical from the point of view of production and economy in tooling and assembly costs.

The competitions are open to persons of British nationality and equal points will be awarded for design, originality, practicability and presentation. An exhibition will be held in London, and probably other provincial centres, of the winning designs immediately after the judging has taken place. Entries must be submitted before May 22, 1954. Those interested should write for details and application forms to the Institute of British Carriage and Automobile Manufacturers, 50 Pall Mall, London SW1.

Modern restaurant in Liverpool



This illustration shows the new air conditioned 'Mersey Room' restaurant in the Liverpool store of Lewis's Ltd. In style the interiors have many characteristics which were seen for the first time in the Time & Life building in New Bond Street (DESIGN March pages 12-54). This is particularly noticeable in the leather covered balustrades. The abstract mosaic decoration on the columns was designed and carried out by A. H. J. Dernbach in vitreous glass. Panels of cedar of Lebanon line the walls and carry 16 incised decorations by Susan Einzig depicting events in the history of Liverpool. English cherry wood is used for the chairs which have leather seats and woven cane backs and were made by Bath Cabinet Makers Ltd. The table lamps are of bronze with nylon shades. Designers: Misha Black, Robert Gutmann and Gunther Hoffstead of Design Research Unit. General Contractor: E. Pollard & Co Ltd.

New design department

The Scientists and Technologists Engineering Partnership Ltd, a recently established firm of engineering designers and consultants, has been joined by James Scott Smith, a past student of the Central School of Arts and Crafts, to form a new industrial design department.

It is hoped that the new department will help to solve the problem of integrating the aesthetic with the technical aspects of product design, each new product being discussed by both the technical and industrial designers. The firm has recently moved into new premises at Abbey House, Victoria Street, London SW1.



New unit furniture

These living-room pieces are from a new range of unit furniture designed by Victor E. Elford for J. H. Hunt & Co (Yatton) Ltd. The sofa and matching chair have walnut arms with beech spokes and are upholstered with DUNLOPILLO cushions on tension springs. The cabinet with detachable bureau top is finished in walnut and beech or alternatively in natural oak. It is also available with legs in place of the plinth base. This range of furniture, styled in the contemporary manner, is probably the largest of its kind to be introduced en masse by a single British firm.



British Railways' travel centre

Modern design is playing an increasing part in the programme for redesigning some of the offices, refreshment rooms and booking halls of British Railways (DESIGN May page 36). This illustration shows part of the Travel Centre at Rex House, Lower Regent Street, which has recently been designed under the direction of Dr F. S. C. Curtis, Chief Architect of the Executive. On the left is the rear of the window display screens. The far end wall is lined with polished mahogany. The slate grey carpet incorporating the letters BR was made by T. F. Firth & Sons Ltd and partially covers the teak floor. The chairs and settee are by S. Hille & Co Ltd, and the table is by L M Furniture Ltd. Special furniture and fittings were designed by P. W. McIver, assisted by Ian Colquhoun and Derrick Shorten.

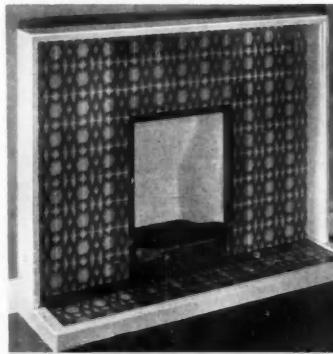
Belgian design organisation

A new association for the promotion of good design in industry has been set up in Belgium with headquarters at Rue Montoyer, 14, Brussels. The association, called 'Art et Travail' or, in Flemish, 'Kunst en Arbeid' has J. del Marmol as president and J. van Lerberghe as secretary.

New designs for fireplaces



These illustrations show examples from a new range of fireplaces designed and made by W. N. Froy & Co Ltd. They were exhibited recently at the firm's premises in Hammersmith in a series of room settings arranged by Heal's. All the fireplaces made good use of the modern, wooden frame type of construction with the centre panels filled with plain or decorated tiles. In some instances, however, the effect of simplicity and dignity which can be achieved with this type of design, was spoilt by the use of heavily moulded frames or glossy veneered surfaces. The oak frame of the nursery fireplace, above, is thicker than it need be, though the narrow stainless steel strip provides a neat edge to the fireplace opening. The most interesting feature of this design is the sloping hearth which prevents ash from spilling on to the floor. The much lighter, painted wooden frame in the bedroom fireplace, below, is more satisfactory in its proportions, and provides an excellent foil to the brown and fawn decorated tiles. These were designed and screen-printed by the firm.



Lighting design

A laboratory of Lighting Design has been established in the School of Architecture and Planning at the Massachusetts Institute of Technology. This was announced by the head of the Department of Architecture, Professor Lawrence B. Anderson, who explained that the purpose of the new Laboratory was for "the study of various principles of producing and controlling daylight and artificial light in relation to

decoration, heating, ventilation and acoustics." A seminar on Vision, Brightness and Design was held recently to mark the establishment of the Laboratory, and at the seminar dinner, H. C. Weston, honorary secretary and director of the British Illumination Engineering Society and director of the British Medical Research Council's Group for Research in Occupational Optics, was invited as a special guest.

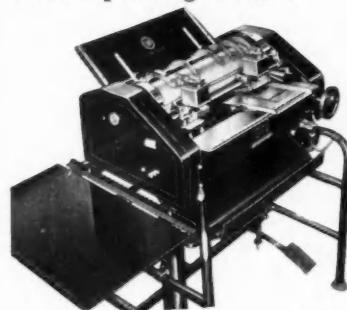
Change of address

Richard Dendy and Associates, model makers and designers have moved to new premises at 4, 5 and 6 Seaton Place, Hampstead Road, NW1.

Company's new name

The Structural and Mechanical Development Engineers Ltd of Slough, Bucks, has announced that the company's name has been changed to SMD Engineers Ltd. The telegraphic address has been altered to ALFRAME SLOUGH.

Office duplicating machine



J. P. McCrum

J. P. McCrum left the staff of the Scottish Committee of the CoID at the end of November in order to devote himself to practical, creative designing and also to spend more time in his workshop where he is perhaps happiest of all. It was, curiously enough, as a student in the Mural Painting School at the Royal College of Art that he developed his fascination for machinery and technical problems - not in the studios, but across the road in the South Kensington Science Museum. Before joining the Scottish Committee of the Council in 1948 he was head of the Design School at the Glasgow School of Art. His combination of aesthetic sensitivity with a practical understanding of technical problems has done much towards gaining for the Council's work the confidence of industry. Joe McCrum will be much missed in Bothwell Street, but his creative and technical ability will still be available to Scottish industry and it is to be hoped that it will make full use of him and keep him north of the border.



These illustrations show clearly the general trend of development today in the design of office equipment. They are examples of early and more recent models in the BANDA series of spirit duplicators. The early 'Simplex' machine, left, is characteristic of the clumsy open-framed type of construction which is now being replaced by cleaner, enclosed forms, with much improved arrangements of controls and operating facilities. This can be seen in the later 'Duplex' machine, right. It is designed to be broken down into five separate pieces for crating and has a grey enameled hammer finish. In a narrow version of the machine, for use in confined spaces, the side racks for storing papers are omitted. Designer: Scott-Ashford Associates Ltd in co-operation with the firm's engineers. Maker: Block & Anderson Ltd.

Textile competition awards

The Textile Institute has announced the names of the winning students in the 1953 competition for design and structure of yarns and fabrics. Prizes amounting to £252 were offered in the twelve sections of the competitions. The first prize winners in the design sections are as follows: Printed dress fabrics, Ross Phillips, Regional College of Arts & Crafts, Bradford; Printed furnishing fabrics, Jean Roberts, Regional College of Art, Manchester; Contemporary design for a body carpet, Patricia Mary Nuttall, Blackburn Municipal Technical College and School of Art. No awards were made in the section devoted to contemporary designs for rugs.

New design journal in USA

A new bi-monthly review called INDUSTRIAL DESIGN will be produced next year by Whitney Publications Inc the publishers of the American journal INTERIORS. This will

be the first American magazine devoted to a review of current industrial product design. The first issue will appear in February 1954.

New publishing service

A co-operative publishing scheme for the planning and production of special purpose reports, surveys, etc, has been announced by Newman Neame Ltd and the Economist Intelligence Unit. By pooling the resources of these two organisations it is hoped that a unique publishing service will be established, with the emphasis on well-planned and attractively presented 'literature', that should be of great value to many firms.

German lecture tour

Robert Gutmann, the architect and industrial designer who is also an Associate of the Design Research Unit, has recently been on a lecture tour of Germany. The tour was organised by the Rat für Formgebung, the

German equivalent of the CoID (DESIGN December 1952 page 32). Mr Gutmann addressed industrialists at luncheons and gave illustrated lectures to students on industrial design.

Type sheet cabinet



These new WACE type sheets will be of great value to the working typographer as each sheet displays the complete alphabet and numerals in every size of face available. In the examples of machine-set type faces each size of type has been set to an ideal measure using the same copy, so that direct comparisons may be made. The cabinet is supplied with a complete set of the sheets which have been issued so far and the range is being extended to include most of the popular type faces. Maker: Wace & Co Ltd.

Ideal home

The 1954 'Ideal Home Exhibition' will be held at Olympia from March 2 - March 27.

LETTERS

Pioneers in lighting

SIR: In the September issue of DESIGN seven pages of text and illustrations (pages 26-32) extolled the virtues and achievements of the Boissevain family and the products of the Merchant Adventurers Ltd.

While admiring their initiative and their unwavering adherence to their original progressive outlook, I feel very strongly that some slight credit might have been given to other pioneers of lighting design who are not entirely unknown to readers of DESIGN.

H. T. Young in 1927 was aware of the need for a new approach to the design of lighting fittings, and bought from Jean Perzel of Paris a most interesting range of fittings for his new showroom in Knightsbridge. In 1928 I was given the great opportunity of developing Troughton & Young's new venture; and within a few years produced the ULTRALUX range of lighting fittings. These were then, and still are, the only really comprehensive series of enclosed and semi-enclosed flashed opal glass units. LOVRELUX, VERSALITE and other types that followed on have, without question, influenced designers both in this country and abroad. The Boissevains would, I feel, agree that the design of their products and the layout of their catalogues bear evidence of this influence.

In view of the enterprise and courage of

at least one other manufacturer of lighting fittings, H. McG. Dunnett's article is misleading to readers of DESIGN, not because of the credit given to the Boissevains, but by the deliberate omission of any mention of talent outside that family circle.

A. B. READ
West Riding
Upton
Poole
Dorset

Paying the designer

SIR: Your note entitled 'Paying the designer' (DESIGN November page 34) in which you quote fees paid for items of design in Holland, does not, in my opinion, present a fair picture. To translate fees received by foreign nationals into terms of Sterling for purposes of comparison is no help at all, and least of all to other designers. The document from which you have extracted your figures was, I must assume, prepared for internal use in Holland and will, no doubt, be useful to Netherlands designers. But these figures mean nothing to us unless they are accompanied by and related to the cost of living, level of income tax, travelling and other expenses which must be met out of the fees in the country concerned. Five pounds for the design of a door knob in England, with a high cost of living, a heavy income tax and every other expense on the same scale, may in the last analysis be a poor rate for the job, whereas 52.50 florins (the Netherlands equivalent of £5 at the present rate of exchange) may be a good rate, if, as may well be, the Netherlands cost of living, rate of taxation, etc, is on a low percentage in relation to the 52.50 florins. A survey of average fees for design, placed alongside the costs which have to be deducted from them would be interesting. From such a survey we should be able to arrive at some conclusions as to the relative standards of living enjoyed by designers in other countries.

LEONARD BEAUMONT
28 Southway
Totteridge
London N20

A G B I appeal

SIR: The word 'charity', for many over the past century or so, has acquired a significance remote from its true meaning which one dictionary defines as 'love towards our fellow-men; the chief of the Christian graces'. The 'welfare state' is steadily removing the stigma that for many was attached to the acceptance of public assistance, although the elderly, brought up in a different tradition, probably look askance at the new dispensation. But the benefits of the welfare state are not yet universal, and with greatly diminished opportunities for saving, the charitable institutions are likely to be called upon in ever-increasing measure to help those who, through age or infirmity, are no longer able to keep want at bay. Especially does this apply to artists, whose livelihood depends upon the exercise of highly sensitive faculties and physical skill, who are likely to fall by the wayside more quickly than others. For practitioners in all the arts, including the rapidly-expanding profession of industrial artist, the Artists' General Benevolent Institution provides the comfort of knowing that in adversity there is a sure source of succour, established, supported and administered for the 'love towards our fellow men'.

To all who have not been otherwise approached I would appeal through your courtesy for support; please send what you can afford to

JOHN W. WATERER
The Society of Industrial Artists
Steward for the AGBI, May 1953-4
S. Clarke & Co Ltd
Bowling Green Lane
London EC1

Student furniture

These chairs, the work of students at the LCC Technical College for the Furnishing Trades, were shown recently in the College's summer exhibition. The armchair, left, designed and made by Loo Kam Fatt shows the influence of a chair designed by Robin Day in 1951. Here the thick wooden arm supports, which contrast unfavourably with the light metal structure of the earlier chair, are not relieved by the complex cut-out shape of the pre-formed plywood back. The cabinet, right, designed and made by Alan G. Pont, shows a more direct approach towards basic design problems. The tambour front works well and the standard of construction generally is good. The desire to experiment with new shapes and to make use of the qualities of different types of wood was clearly indicated in the exhibition though some of the examples would be unsuitable for mass production techniques.



BOOKS

Decorative Art, The Studio Year Book of Furnishing and Decoration 1953-54, edited by Rathbone Holme and Kathleen M. Frost, *The Studio Publications*, 30s

The most interesting sections in this year's **DECORATIVE ART** are those dealing with ceramics and glass. In the former, the contributions from Scandinavia and particularly Sweden display an inventiveness and sensitivity both in form and pattern that is in no way equalled by the 'crafty-ness' of the British examples. The Scandinavian countries again show their special skill in glass ware and there are several fine pieces from Holland. It is unfair to make these national comparisons from a small selection but it is irresistible and one can only conclude that English designers in ceramics, glass and in silverware are much too deeply attached to the formality of traditional shapes. But perhaps the examples are as unrepresentative as they certainly are in the section on lighting; here it is the Italian and again Scandinavian fittings that impress but only because recent developments in this country are not illustrated. The book has an adequate section on textiles and here British designers do not lag behind, although it is difficult to assess fabric from the photograph. There is also a selection of contemporary domestic architecture, but for the most part this is quite undistinguished.

The largest section is that devoted to interiors and furnishing. Most of the interiors are pleasant enough; only a few will provoke serious thought and most of the examples from France reflect the deplorable standards of French taste in industrial design. The examples of British furniture conform on the whole with what is known in the trade as 'contemporary' and there is little evidence of technical experimentation, and such interesting furniture as is shown is modish rather than thoughtful. The book contains an excellent contribution from J. C. Pritchard who pleads the necessity of consumer education and brings forward some fresh practical proposals for furthering this. He poses the old dilemma of the manufacturer: how can non-traditional furniture be marketed with the advantages of large-scale production without large-scale consumer demand? But surely the tide has turned and that demand now exists. As one furniture manufacturer was heard to say, 'contemporary design has a big future!' And seriously, one hopes it has, but are we not resting on our laurels, content to tolerate a tendency towards an effete tidiness. Even in the Scandinavian examples, the fine craftsmanship can only partly compensate for a conservatism in technique and design.

These remarks are, of course, no reflection on **DECORATIVE ART** whose publishers say that it deals with 'contemporary outlook in domestic furnishing'. And so indeed it does, in a handsomely produced volume, profusely illustrated, with some fine coloured plates. One can only regret that the Editors' excellent foreword was not longer so that they could have enlarged upon their viewpoints relevant to each aspect, except, certainly, the new section on flower display. It is difficult for this reviewer to take seriously: 'Daffodils and leaves in a honey pot concealed by driftwood and grey "oysters" prised from a silver birch fixed to a round bread board.'

ERIC LYONS

The Furnisher's Encyclopaedia, edited by Michael Sheridan, *The National Trade Press*, 3 gns

Although a great many books have been published on the divers subjects associated with home furnishing, nothing on the scale of the **FURNISHER'S ENCYCLOPAEDIA** has ever before been attempted. The editor is to be congratulated, not only upon the very comprehensive and able manner in which the book has been produced, but also for his imagination and audacity in conceiving a single volume which embraces such a wide and varied field of knowledge.

The book comprises thirteen sections: each one dealing separately with a particular aspect of furnishing and is written by one or more well-known authorities. Among the twenty contributors are Grace Lovat Fraser and John Hill who write on Interior Decoration; Leslie Julius, Rosetta Desbrow, Edward H. Pinto, Ronald Fisher, H. J. Cutler, P. I. A. Rogers and Harry Burgess who are jointly responsible for the sections on cabinet furniture, upholstery, beds and bedding; Michael Sheridan, in conjunction with Alma Faulkner and Verrall Dunlop, who have written about textiles; J. C. Whetman and John H. Mellor who contribute the chapters on floor coverings; Frank Martin who writes an informative chapter on window and departmental display; and Agnes Mailli who treats the section on soft furnishing workrooms in a precise manner which should prove valuable to both the novice and the expert, for it covers workroom organisation and administration as well as giving detailed information on estimating and making up curtains, loose covers, down quilts and carpets.

The whole book is well illustrated and the text, whilst carefully avoiding unnecessary technicalities, deals with each subject concisely and adequately. There are treatises upon the different kinds of raw materials available for furniture, floor coverings, and textiles; methods of processing and manufacturing; as well as surveys on the historical background and the evolution of design in home furnishings. To augment and simplify the dictionary of textiles, which forms part of the furnishing fabrics section, actual samples of materials have been included. Of particular interest to the retailer are the chapters dealing with the care and maintenance of furniture and floor coverings, which also include explanations of the more common causes of complaint.

In addition to the subjects already referred to, there is an excellent résumé by Gordon Russell and Michael Sheridan on the development and trend of design in furniture and soft furnishings which are likely to have a far-reaching effect in encouraging the furniture trade towards appreciating and promoting better designed home equipment. It should also help to dispel some of the nonsense which has already been written and spoken about 'Contemporary' styles.

Of special interest to executives and principals of businesses are the chapters devoted to contract furnishing, by W. J. Searle, merchandise quality standards, stock control, and staff training by Douglas Edwards, and a clear and useful interpretation of some of the complicated legal responsibilities peculiar to the furnisher, contributed by Denise Bonnett, an authority on the subject and editor of **FURNITURE RECORD**.

Whilst the volume contains a wealth of valuable specialised information it is by no means difficult to read, for each section appears to have been guided by the thought expressed in the Foreword by Anthony S. Heal that ". . . the house furnishing business comprises many of various kinds of merchandise each of which demands specialised knowledge from those who buy

and sell it; but merely to know about the goods they sell is not, by any means, the end of the matter for house furnishers must, above all, understand how to make a happy synthesis of several elements if they are to succeed in making homes fit for people to live in comfortably . . ."

Although primarily intended as a work of reference and a text book for those in the distributive side of the furniture trade, it has much to recommend it as a valuable addition to the libraries of architects, designers, artists, interior decorators, journalists, educationists, or in fact anyone who requires to have more than a superficial interest in any aspect of furnishing.

For easy day-to-day reference the whole volume is well indexed, and for those who wish to make a more intensive study of a particular subject each section has a detailed bibliography. The price of the **FURNISHER'S ENCYCLOPAEDIA** at three guineas cannot be considered expensive for such a comprehensive work, but it will, unfortunately, put it out of the reach of many young students, particularly those studying for the National Furnishing Diploma, for whom it is admirably suited. The National Trade Press would do well to consider making the volume available to such persons by publishing it in sections, each of which could be purchased separately and bound in a suitable cover.

JOHN S. L. BOWLES

Designers in this issue

Joe Adkinson (8, 10). Alvar Aalto (6). W. J. Bassett-Lowke, M.I.LOCO.E, F.RSA (33). Leonard Beaumont, F.SIA (36). Walter Bergmann (33). Mishka Black, OBE, F.SIA, M.Inst.RA (DRU) (34, 35). Günter Böcker (33). Marcel Breuer (8, 9, 10). James Butler, A.MI.Mech.E, SCI (15). W. Wells Coates, OBE, RDI, F.RIBA (18, 19). Ian Colquhoun, A.RIBA, AA.Dip (34). Le Corbusier (8, 9). Sir William Crawford & Partners Ltd (21). Dr F. S. C. Curtis, A.RIBA (34). A. H. J. Dernbach (34). Marion Ehlers (21). Victor E. Elford (34). Susan Einzig, M.SIA (34). Loo Kam Fatt (36). Monica Ford, Des.RCA (33). Kaj Franck (6). K. H. Franck (33). Abram Games, F.SIA (33). Alan E. Gatland (33). John Grant LSIA (18, 19). Robert Gutmann, F.SIA (DRU) (34, 35). Peter Hatch, M.SIA (Art Editor). F. H. K. Henrion, MBE, F.SIA (cover). Gunther Hoffstead, M.SIA (DRU) (34). Pierre Jeanneret (10). Dora Jung (6). Fritz Lampi, M.SIA, FCIAD, MSGT (21). Charles Ledger (18, 19). P. W. McIver, A.RIBA (34). William Newland (21). H. A. Nieboer, F.RSA, AMME, MSAME, SID (35). Brian O'Rourke, A.R.A., F.RIBA, F.SIA (19). Alan G. Pont (36). Enrico Peressutti (8). Charlotte Perriand (10). David W. Pye, A.A.Hons.Dip, A.RIBA, M.SIA (21). A. B. Read, RDI, A.RCA, F.SIA (36). Anne Wynne Reeves (21). Mies van der Rohe (8, 9). Scott-Ashford Associates Ltd (35). Timo Sarpaneva (6). Derrick Shorten, A.RIBA (34). James Scott Smith (34). G. H. Streeter (33). Ilmari Tapiovaara (6). Michael Thonet (7, 8, 10). N. Vergette (21). John Waterer, RDI, F.SIA (21, 36). Tapio Wirkkala (6). J. K. White, MA (Cantab), M.SIA (18, 19). A. H. Woodfull, M.SIA (13, 14, 15, 17).

Designers' addresses may be obtained from the EDITOR.

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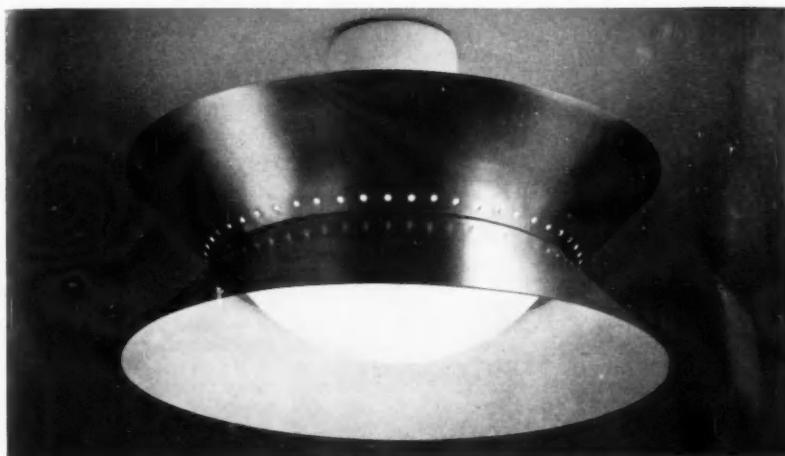
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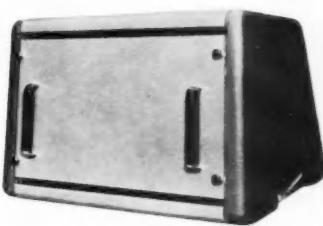
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